

ENIXE

**MANUALE DI
INSTALLAZIONE
USO
MANUTENZIONE**



CRIOCABIN
TASTE PRESERVATION

1. Introduction	5
1.1 Introduction and purpose of the Manual	5
1.1.1 Use of this Manual	5
1.2 Warranty conditions	5
1.3 Graphical conventions	5
1.4 Personnel qualifications	6
1.5 General warnings	6
1.5.1 To be arranged by the Customer	7
1.5.2 Technical assistance	7
1.5.3 Spare parts	7
2. Information on safety	8
2.1 General regulations - Training	8
2.2 General regulations - Skills and checks	8
2.3 Fire regulations	8
2.4 First aid regulations	8
3. Product specification	10
3.1 General description	10
3.1.1 Structural components	10
3.1.2 Functional components	10
3.1.3 Control system	10
3.2 Technical characteristics	11
3.2.1 Dimensions	11
3.2.2 Lay-out	12
3.2.3 Weight table	12
3.2.4 Admissible loads	12
3.2.5 Refrigeration system:	13
3.2.6 Energy consumption	13
3.3 Noise level	13
3.4 Other emissions	13
3.5 Environmental requirements for operation	14
3.6 Description of residual risks	14
3.7 Specific protections	15
4. Instructions for commissioning	15
4.1 Transport, handling and positioning	15
4.1.1 Precautions to be taken upon receipt of the product	15
4.1.2 Handling and positioning	16
4.2 Unpacking and disposal of packaging materials	17
4.3 Assembly	18
5. ENIXE DUCTING KIT	20
5.1 ASSEMBLY INSTRUCTIONS 'ENIXE' FLAT SHOULDERS	29
5.2 FLAT DUCTING SHOULDERS WITH SIDE CASE	34
5.3 Disassembly and subsequent reassembly	35
5.4 Fixing	35
5.5 Installation	35
5.5.1 Connection to a remote condensing unit	35

5.5.2 Connection to the mains	36
5.5.3 Connection to the drain line	36
5.6 Commissioning	37
5.6.1 Starting:	37
5.6.2 Setting	37
5.7 Idle time and restarting	37
6. Instructions for use	38
6.1 Correct use of the cabinet	38
6.2 Uses to be avoided	38
6.3 Working limits	39
6.4 Cabinet control functions	39
6.4.1 Manual defrosting	39
7. Maintenance instructions	39
7.1 General warnings	39
7.2 Periodical cleaning	39
7.3 Bulb replacing	40
7.4 Periodical maintenance	40
7.4.1 Check of the glass lifting system	40
7.5 Special maintenance	40
7.6 Troubleshooting	41
8. Instructions for demolition and disposal	41
9. Parameter table of control panel	42
9.1 List of parameters	42
9.2 Wiring diagrams	44
10. Attachments	46
10.1 Reference to manuals of other suppliers	46
10.2 Declaration of conformity: as attached	46

1. Introduction

1.1 Introduction and purpose of the Manual

Thank you for choosing Criocabin S.p.a., hereinafter referred to as the Manufacturer. We are glad to have you as our Customer and hope you will be fully satisfied with this product.

This Use and Maintenance Manual is an integral part of the product and is aimed at anyone who works on the product or interacts with its users.

The purpose of this Manual is to supply the necessary information to enable:

- *quick identification of the product parts;*
- *all the commissioning, functioning and maintenance operations to be carried out on the product;*
- *the health and safety of all users and exposed persons to be guaranteed at all stages.*

All information, drawings, diagrams, tables and any other contents of this Use and Maintenance Manual are confidential and therefore the full or partial reproduction or disclosure thereof to third parties is subject to the authorisation of the Manufacturer in its capacity as sole owner.

1.1.1 Use of this Manual

Read this manual before handling, installing and using the product, and likewise before carrying out any maintenance work on it.

The term Manufacturer will always be used to indicate Criocabin S.p.a., while the generic term Supplier will be used to indicate other manufacturers of specific components fitted in the product.

The term Dealer will be used to indicate the company that, according to a distribution agreement signed with the Manufacturer, is authorised to sell the product and constitutes the Customer's commercial counterpart.

Keep this manual away from sources of heat, dampness and corrosive agents throughout the product working life, pass it on to any other user or subsequent owner and keep it handy for easy reference by its users.

Handle this manual with care; do not damage it, tear out pages or modify its content for any reason.

The Manufacturer reserves the right to communicate at any moment any information which is considered necessary for a better and safer use of the product. Such information, provided as modifications, updating or additions, will have to be considered in all respects as an integral part of this manual.

1.2 Warranty conditions

Warranty conditions are stated in the sales agreement which is accepted by the Customer by means of order confirmation.

1.3 Graphical conventions

Bold type is used to highlight information considered important.

References to illustrations are made by means of a number in **bold type** that identifies the illustration (i.e. **Fig. 1**) and, if necessary, by means of a letter or number that identifies the component in question

within the illustration. Illustration references and component references may be used at the same time (i.e. **A - Fig. 1** or **1 - Fig. 1**).

The following graphical symbols are used in this Manual to draw users' attention to information concerning proper and safe use of the product:



NOTE!

This symbol is used to highlight a piece of information or advice, or a rule which is considered particularly important.



CAUTION!

This symbol is used to point out a dangerous operation or situation.



PROHIBITED OPERATION!

This symbol is used to indicate a prohibited operation.

Additionally, the graphical symbols listed below are employed in this manual to show the Personal Protective Equipment which must be worn when installing, using and maintaining the product.

The symbol for each safety device will be found whenever a specific operation requires use of said device.

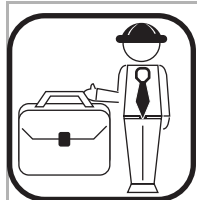


PERSONAL PROTECTIVE EQUIPMENT

This symbol indicates that it is compulsory to wear protective gloves during operations marked by this symbol.

1.4 Personnel qualifications

Here follows a description of the type of personnel to whom this Manual is addressed.



Qualified

The Qualified Technician is a specialised technician who is supplied by the Customer or by the Dealer and is authorised, under different circumstances, to carry out operations such as assembly, disassembly, installation, set-up, start-up, maintenance and repair.

1.5 General warnings

All the indicated safety regulations must be strictly observed by the users of the product.

The instructions written on this Manual will be the object of a training activity given by the Dealer's technical personnel during installation. The Customer will be responsible for selecting, inside their organisation, the people to whom such training activity is addressed and for checking that the trained personnel have reached a learning level which is apt for the tasks assigned to them.

The diagrams enclosed in this Manual are to be used only for extraordinary maintenance and controls.



Note!

It is strictly forbidden to use them to carry out modifications on the product. Possible modifications are to be required directly to the Dealer, specifying all the product technical features and the reasons for such modifications; if approved, modifications must be carried out only by the Manufacturer's personnel or by authorised personnel.



Note!

Any non-authorised tampering/replacement of one or more parts or units of the product may cause accidents and exempt the Manufacturer from civil and criminal liability.

1.5.1 To be arranged by the Customer

Provided for otherwise by special contractual conditions, the Customer is responsible for arranging the following:

- selecting the people to whom the training on the product use is addressed;
- arranging a suitable place for product installation;
- checking that the received product corresponds to the order specifications;
- carrying out all the activities described in the present manual, except where expressly indicated otherwise.

1.5.2 Technical assistance

The Customer may require technical assistance by contacting directly the Dealer's Customer Service according to the ways specified in the Sales Agreement.

1.5.3 Spare parts



Note!

The Customer must always use original spare parts supplied by the Manufacturer. The Manufacturer cannot be held responsible for any damage or injury or any other inconvenience arising from the use of non-original spare parts.

Drawing, references, descriptions and serial numbers for the identification of all the mechanical parts are listed in the section **Spare Parts**.

With regard to the electrical and electronic equipment, please refer to the electrical diagrams 1 and 2.



Note!

When ordering new spare parts, always quote the model and serial number of the product for which the spare parts are required.

2. Information on safety

2.1 General regulations - Training

- *It is recommended that any person who interacts with the product reads this Manual completely before starting to operate.*
- *Negligence or failure to comply with these safety regulations while using and maintaining the product may cause accidents for which the Dealer and the Manufacturer are not responsible.*
- *Finally, it is hereby reminded that according to the provisions of the law in force:*



Note!

Workers must follow the orders and instructions given by the employer.

2.2 General regulations - Skills and checks

- *Only qualified and authorised technical personnel can install, set and carry out extraordinary maintenance on the product.*
- *The product has been designed only for holding food and shall not be used for any other purpose.*
- *Always use the Personal Protective Equipment when recommended.*
- *Arrange fire-fighting equipment adequate to the product technical features.*

2.3 Fire regulations



Warning!

When put in contact with free flames, the refrigerant fluid undergoes a thermal decomposition into a caustic and poisonous substance.

Avoid exposition to sparks and sources of inflammation.

2.4 First aid regulations

The following first aid regulations concern the treatment of injuries that could be caused by the refrigerant fluid.



Warning!

If a refrigerant fluid comes into contact with eyes:

do not rub the eyes;
remove contact lens;
rinse thoroughly for at least 20 minutes.

If a lubricant comes into contact with skin:

wash the skin with a great quantity of water for at least 20 minutes;
leave the skin uncovered.

If a lubricant is swallowed:

drink as much water as possible.

In all the above cases, bring the injured person to the nearest medical facility.



Note!

For further details, refer to the "Safety data sheet" of the refrigerant fluid.

3. Product specification

3.1 General description

3.1.1 Structural components.

The above mentioned cabinet is provided with:

ENIXE 400 / 410

- *Multiplexable to all other Enixe versions with flat, mirrored endwalls.*
- *Food tray heating in bain-marie (EI400) or hot surface versions (EI410).*
- *Heating unit on top part.*
- *304 stainless-steel scratchproof work surface.*
- *AISI 304 stainless-steel unit interior.*
- *Electronic panel.*
- *Superstructure with front uprights with upward-opening square glass.*
- *Fixed 36 cm glass top surface.*
- *Personalised front.*
- *Perimetrical bumper skirting.*
- *Supplied with ready-fitted cabinet.*

3.1.2 Functional components

The cabinet is available in two versions:

- *built-in condensing unit (cabinets with "refrigeration unit");*
- *with remote condensing unit (cabinets "without refrigeration unit")*

All adopted materials are certified for use in food industry and the refrigerants are in conformity with the Regulations in force.

3.1.3 Control system

It is performed through control units.

For specific instructions on its use, refer to the enclosed **"Carel control unit instructions for use"** .

3.2 Technical characteristics

In this manual all dimensions in the technical drawings are given in millimeters (mm).

3.2.1 Dimensions

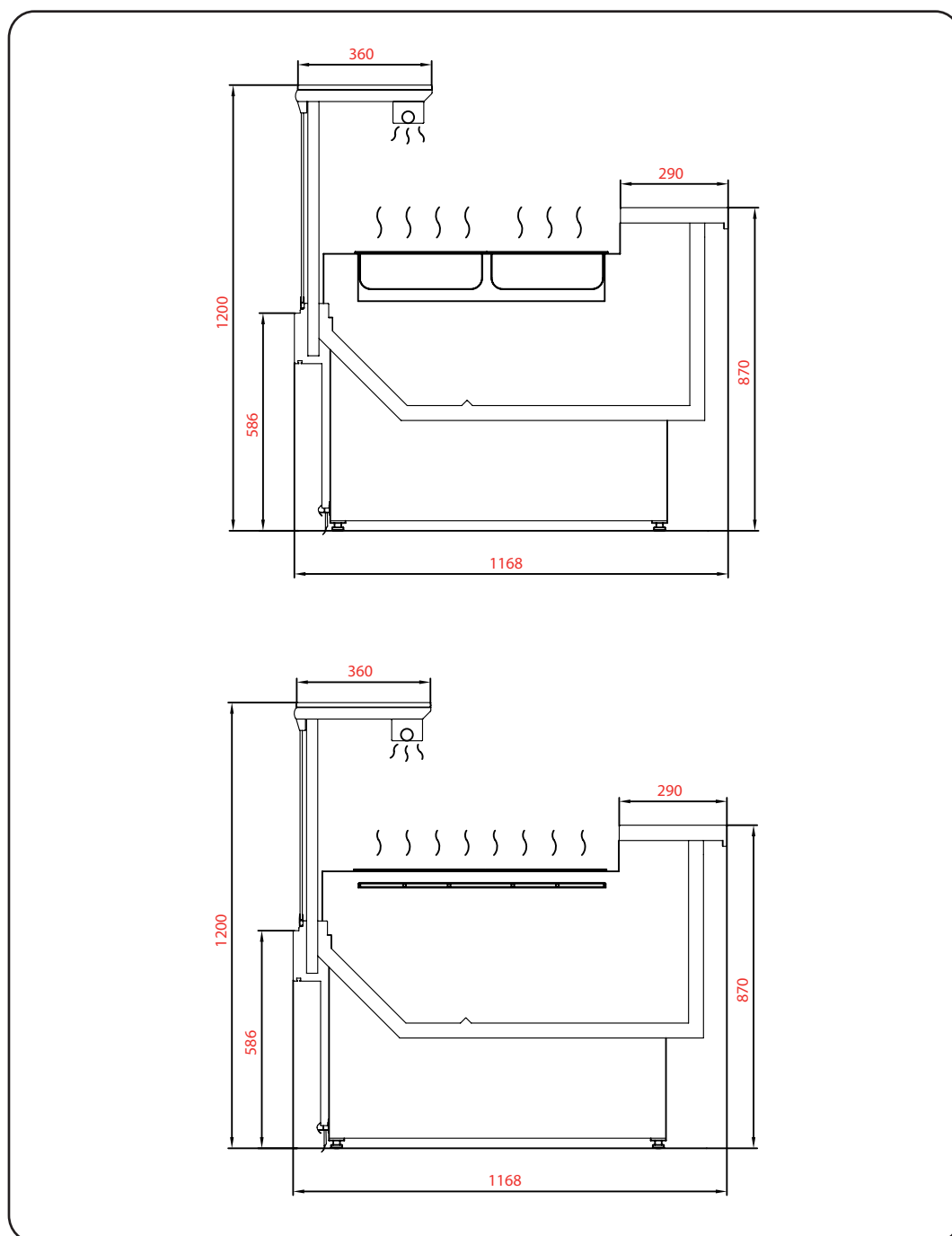


Fig. 1 Dimensions Enixe 400 410

3.2.2 Lay-out

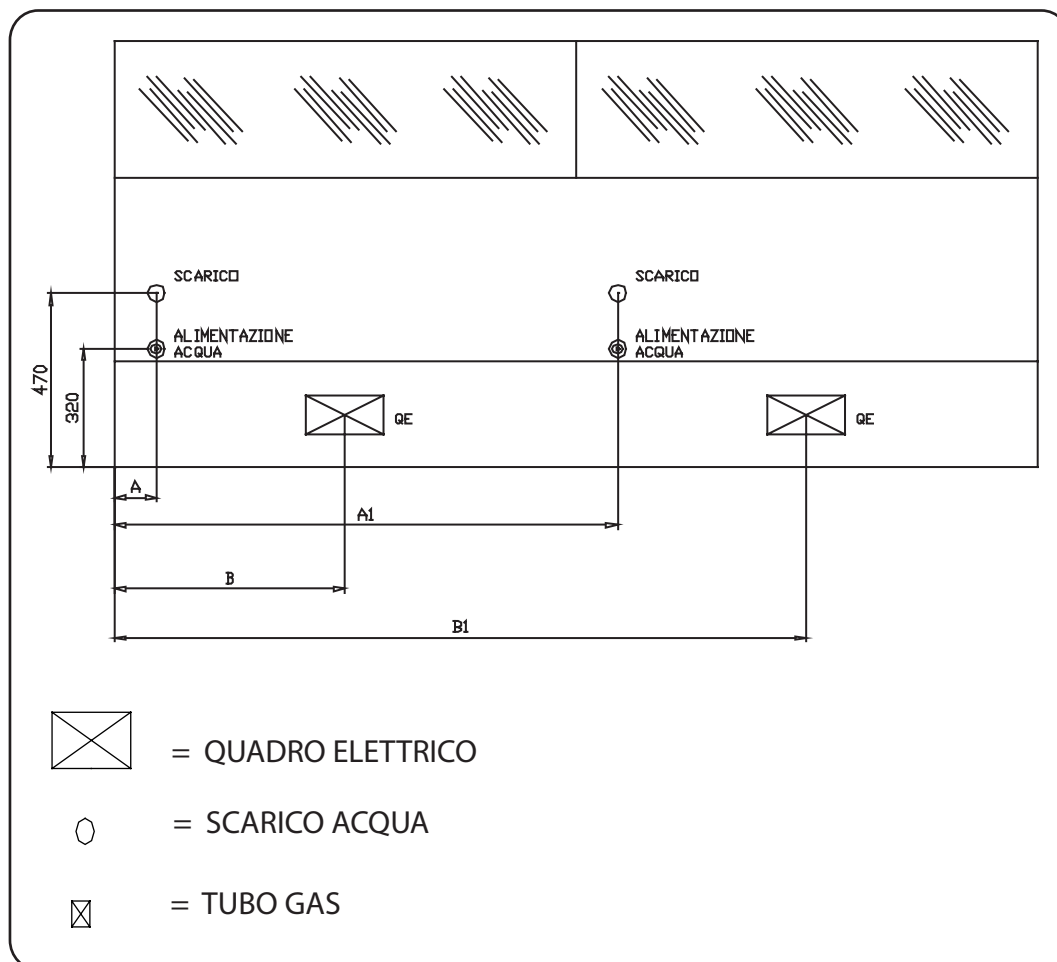


Fig. 2 Lay-out

Lenght	A (mm)	A1 (mm)	B (mm)	B1 (mm)
1250	113	/	625	/
1875	113	/	625	/
2500	113	1.363	625	1.875

3.2.3 Weight table

Cabinet length (mm)	937	1250	1875	2500	3125	3750
Weight (kg) (refrigeration unit not included)	100	125	185	250	310	370
Weight (kg) (refrigeration unit not included)	130	160	220	280	340	410

3.2.4 Admissible loads

As for the cabinet admissible loads, refer to the following table:

COMPONENTS	LOAD
Top canopies, alluminium	max kg 20/m
Top canopies, glass	max kg 8/m
Intermediate shelves	max kg 8/m
Display surfaces	max kg 95/m

3.2.5 Refrigeration system:

As for the refrigerant fluid characteristics, refer to the enclosed **"Refrigerant fluid R404a safety data sheet"**.

3.2.6 Energy consumption

CABINET SECTION LENGTH (mm)	REFRIGERATING CAPACITY REQUIRED TO THE CABINET	Condensing unit (Watt)	Lighting (Watt)	Defrosting heater (Watt)	Fans (Watt)	Gas charge
937	315	430	18	40	225	700
1250	425	430	30	40	300	700
1875	615	500	58	80	450	750
2500	815	590	66	80	600	1000
3125	1010	950	94	120	750	1250
3750	1200	950	102	120	900	1400
AA45	310	400	30	40	225	/
AA90	460	380	48	80	300	750
AC45	310	430	30	40	225	700
AC90	460	430	48	80	450	750

3.3 Noise level

Tests performed by the Manufacturer have shown that the noise level ranges from 55 to 57 dBA in compliance with the EU Directive no. 89/392/EEC.

Noise level depends also on room temperature and, as for cabinets "with refrigeration unit", on the condensing unit cleaning level.

3.4 Other emissions



Warning!

Refrigerant R404a leaks are possible.

As for first aid provisions refer to and, more specifically, to the enclosed **"Refrigerant R404a safety data sheet"**.

3.5 Environmental requirements for operation

To maintain the refrigerating cabinet in good working conditions check that the cabinet temperature class corresponds to that of the room where the cabinet has been installed (see rating plate).

To maintain in good conditions cabinets provided with a refrigerating unit, act as follows:

- *guarantee air exchange in the room, even at floor level, also when the sales outlet is closed;*
- *do not obstruct the condensing unit air outlets by placing products or materials around the cabinet.*

In case of cabinets "without refrigeration unit", act as follows:

- *locate the remote condensing unit in a place sheltered from the atmospheric agents.*

In any case, act as follows:

- *install the cabinet avoiding exposure to direct sunlight and to any other source of heat such as high-intensity incandescent lighting, ovens or heat-emitting bodies such as radiators;*
- *position the cabinet away from doors, windows, air-conditioning outlets to avoid air flows exceeding 0.2 m/s.*

Note!



A room temperature rising and/or a lack of air to the condensing unit not only increases energy consumption but also reduces the cabinet technical performances and may lead to the deterioration of displayed products.

The cabinet operating room temperature is $25\text{ }^{\circ}\text{C} \pm 1\text{ }^{\circ}\text{C}$. The environment humidity shall be $60\% \pm 3\%$.

3.6 Description of residual risks

Warning!

DANGER OF CUTTING



When cleaning the cabinet tray, after having removed the display shelves, be careful not to injure yourself on the evaporator fins as they may be sharp due to their reduced thickness.

When cleaning the condensing unit of cabinets provided "with a refrigerating unit", be careful not to injure yourself on the condensing unit fins, as they may be sharp due to their reduced thickness.



PERSONAL PROTECTIVE EQUIPMENT

It is compulsory to wear protective gloves when performing the above mentioned cleaning operations.

Warning!

DANGER OF BURNS



In case of cabinets provided with electric defrosting, be careful not to get burnt by the heater, as this may still be hot.

In case of infrared lamp heated cabinets, be careful no to get burnt by hot parts.



Warning!

DANGER OF CRUSHING

Cabinet front glasses open by means of piston system. Pistons act as a lifting back-up and prevent the glass from accidental and unexpected falling.

To avoid danger of crushing, check periodically the system efficiency and check if the effort required to lift the glass is increasing, as this will indicate a reduced efficiency of the lifting system.



Warning!

DANGER OF GLASS BREAKING

All movable glasses are hardened and, if broken, fragment in pieces not longer than 3cm, thus reducing the risk of damaging people.

During the normal use of the cabinet glasses are lowered, thus avoiding any danger of breaking due to glass falling.

To store goods and for cleaning purpose glasses are lifted and kept open thanks to the lifting system.

3.7 Specific protections

Normally, the refrigeration system components and the control panel are not accessible. They are sheltered by means of panels placed on the cabinet rear side.



Prohibition!

Except when special maintenance is performed, it is forbidden to remove the panels or use the cabinets when the panels have been removed or are open.

4. Instructions for commissioning

4.1 Transport, handling and positioning

4.1.1 Precautions to be taken upon receipt of the product

The Manufacturer supplies the cabinet ex-works. Before delivery to the carrier, the material, subject matter of the supply contract, shall be carefully inspected by the Manufacturer.

The Manufacturer cannot be held responsible for missing parts or damage to parts that might occur after delivery to the carrier.



Note!

The cabinet components are usually packed; non-packed components have to be covered during transport.

All loose components that might move during transport must be firmly secured.

Note!

Upon receipt of the cabinet, the Customer shall act as follows:



Check that the supplied material corresponds to the order specifications.

Check that the cabinet has not been damaged during transport, that the packaging, if any, has not been tampered with and that no part is missing.

In case of damage or missing parts, immediately inform the carrier and the Manufacturer producing photographic proof.

4.1.2 Handling and positioning

Unless otherwise specified, the Customer is responsible for the above mentioned operations.

To handle the cabinet use a forklift truck of suitable capacity. Refer to the gripping-lifting areas shown in the picture below.

As for the weight of the cabinet, refer to **"3.2 Technical characteristics" on page 11.**

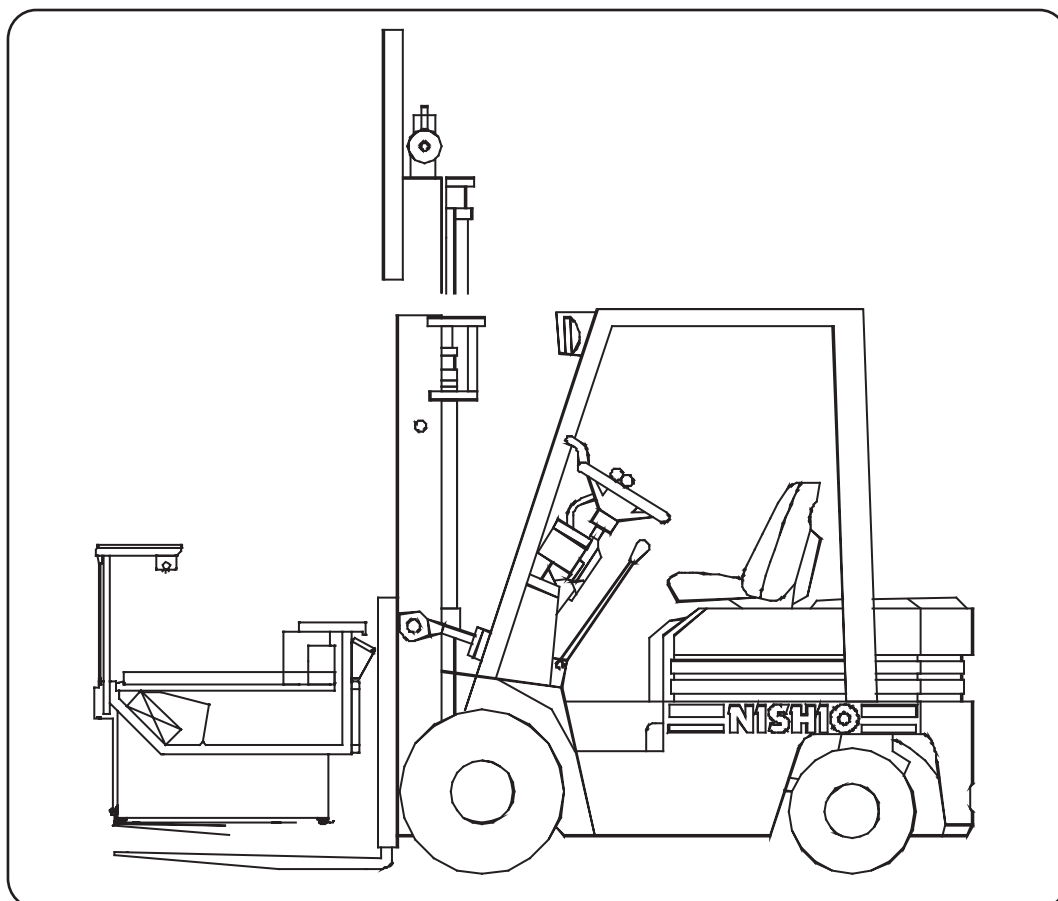


Fig. 3 Handling ENIXE



Note!

It is recommended to move the cabinet only by means of a pallet.

Check the correct balancing of the cabinet before lifting it completely.

Lifting has to be smooth (avoid jerks and jolts).

Make sure that the cabinet has been positioned completely flat. If necessary, adjust the feet screws and check the position of the cabinet with a spirit level. The cabinet must be placed on a completely flat surface to ensure correct operation, to drain any condensing water and to avoid noisy vibrations from the motor.

In case of cabinets provided with a condensate collection tank, make sure that the collection tank has been positioned so that to allow the connection of the relative drainage pipe to the hydraulic system.

4.2 Unpacking and disposal of packaging materials

Unless otherwise specified, the Customer is responsible for the operations mentioned below.

Remove the packaging only after having positioned the unit.

Packaging must be disposed of in compliance with the laws in force.

4.3 Assembly

Unless otherwise specified, the Customer is responsible for the operations mentioned below.

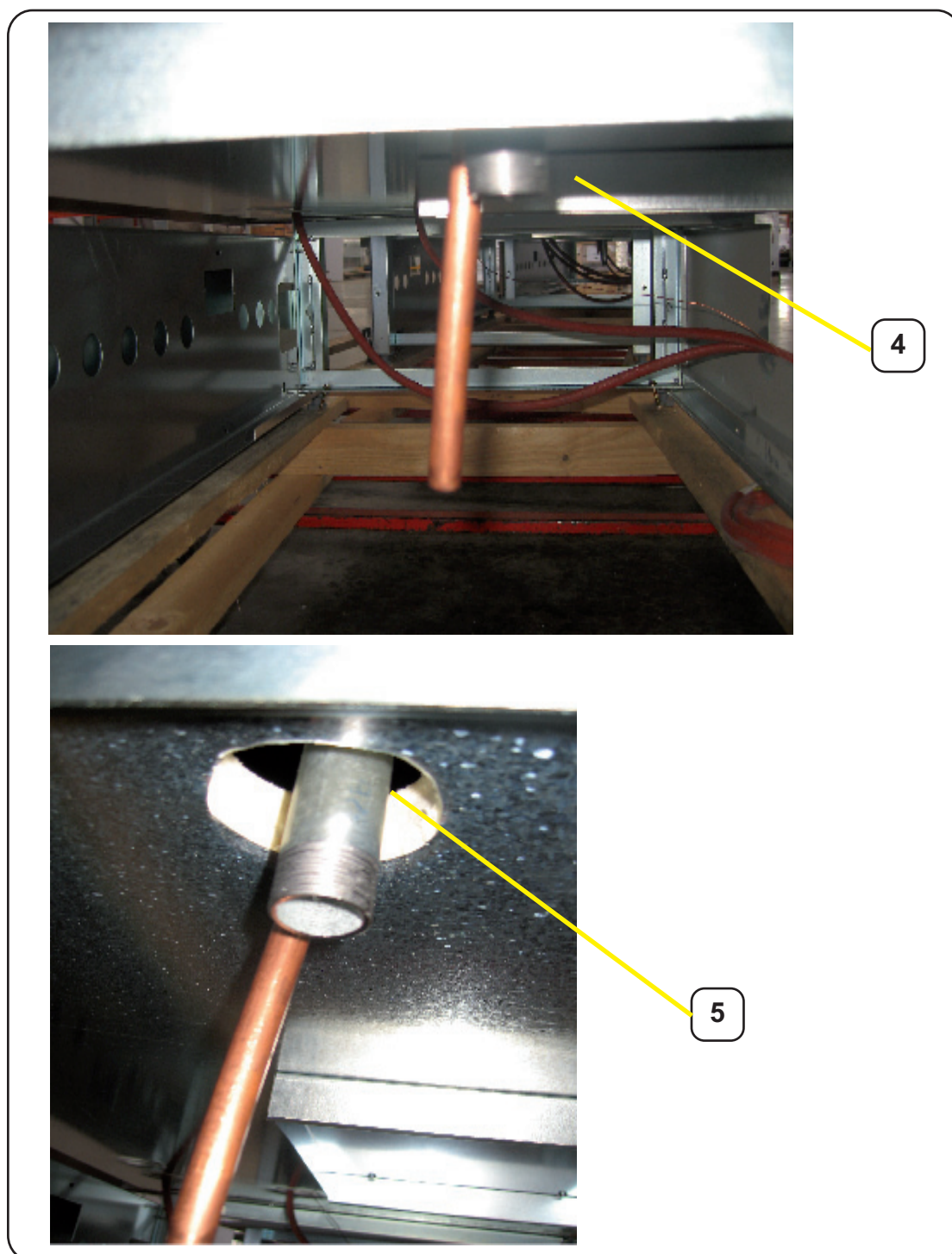


Fig. 4 Water pipe connection

Single out the water pipe located under the tank **(4)**.

Connect a pipe suitable to the existing coupling **(5)**.

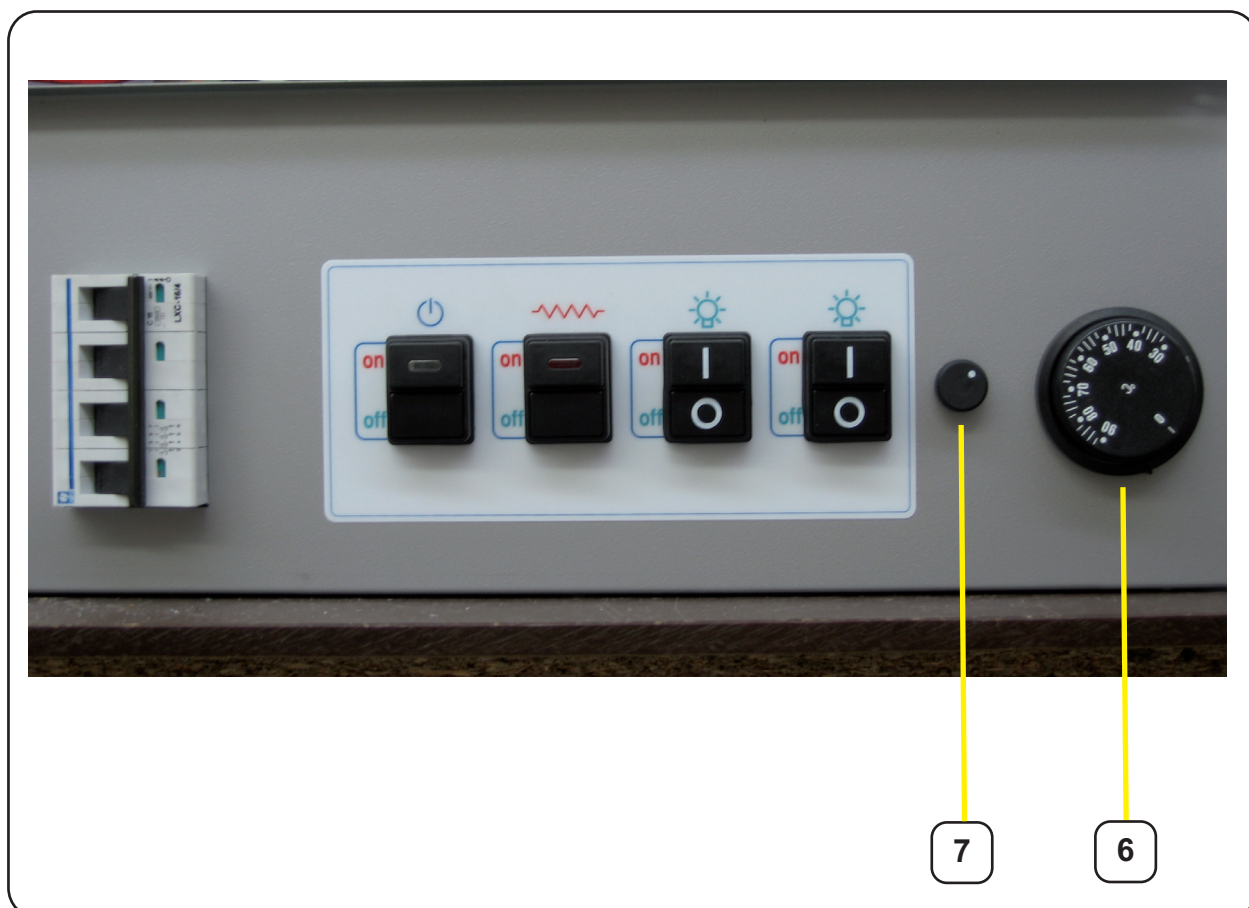


Fig. 5 Control board setting

Set water temperature by means of the thermostat **(6)**.

Set the heating lamp intensity by means of the intensity dial **(7)**.

5. ENIXE DUCTING KIT

RIFERIMENTI KIT / REFERENCES KIT

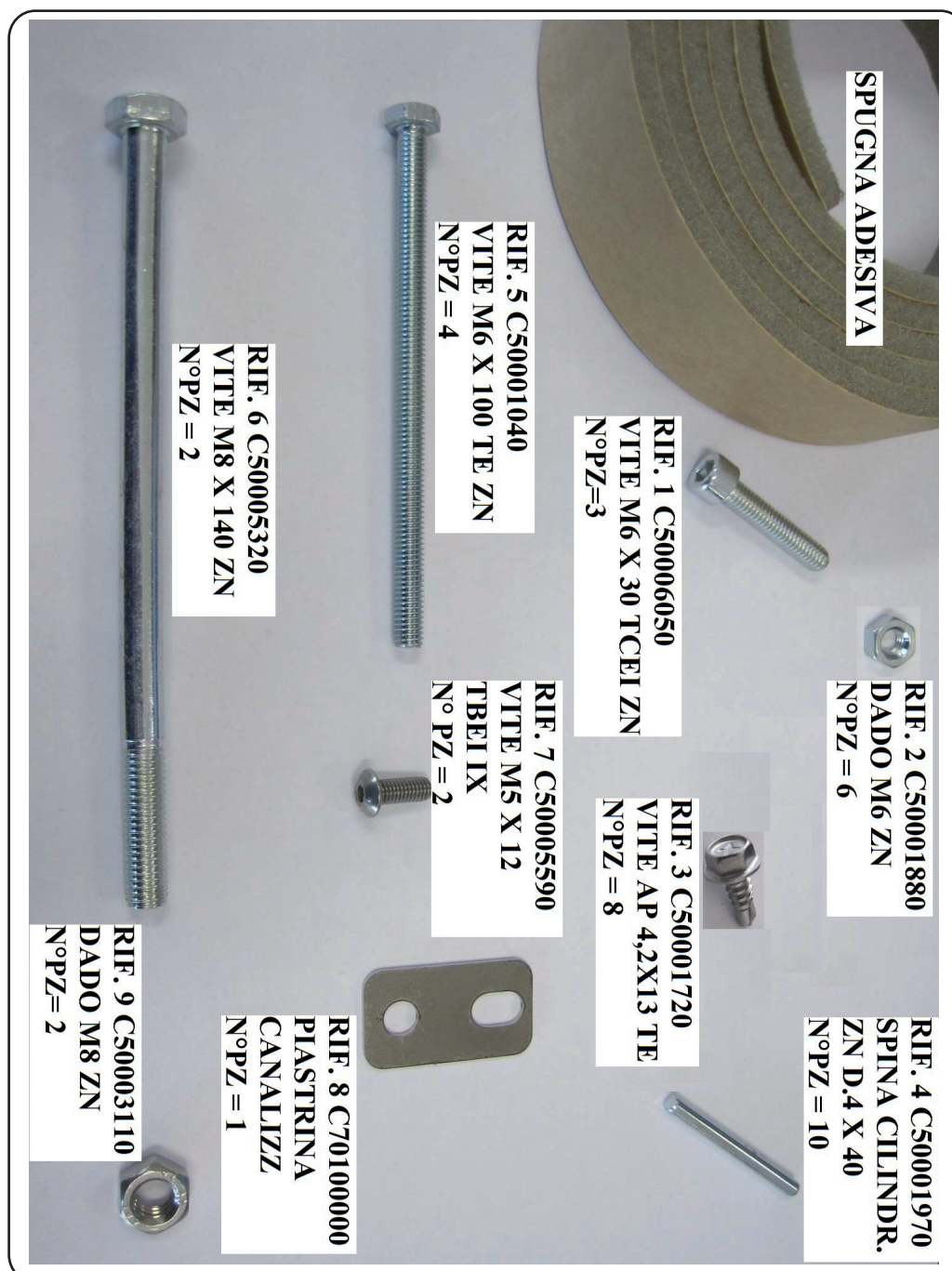


Fig. 6 ENIXE DUCTING HARDWARE KIT

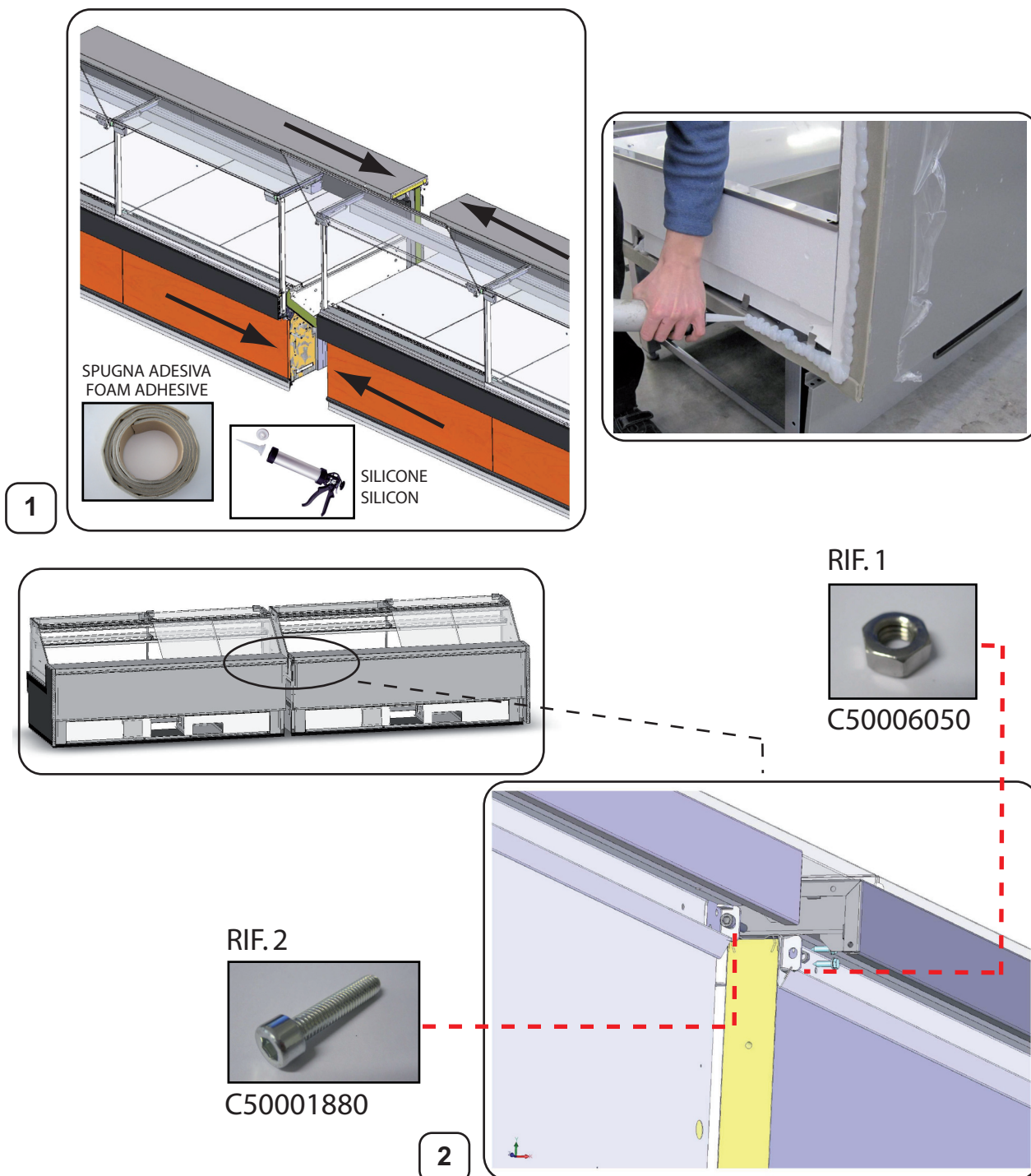


Fig. 7 Ducting the first phase

- a) Bring together the two cabinets to be ducted **(1)**
- b) To join the two cabinets, secure the screw REF. 1 C50006050 SCREW M6 X 30 TCEI ZN with respective nut REF. 2 C50001880 NUT M6 ZN between the two angle bars **(2)**

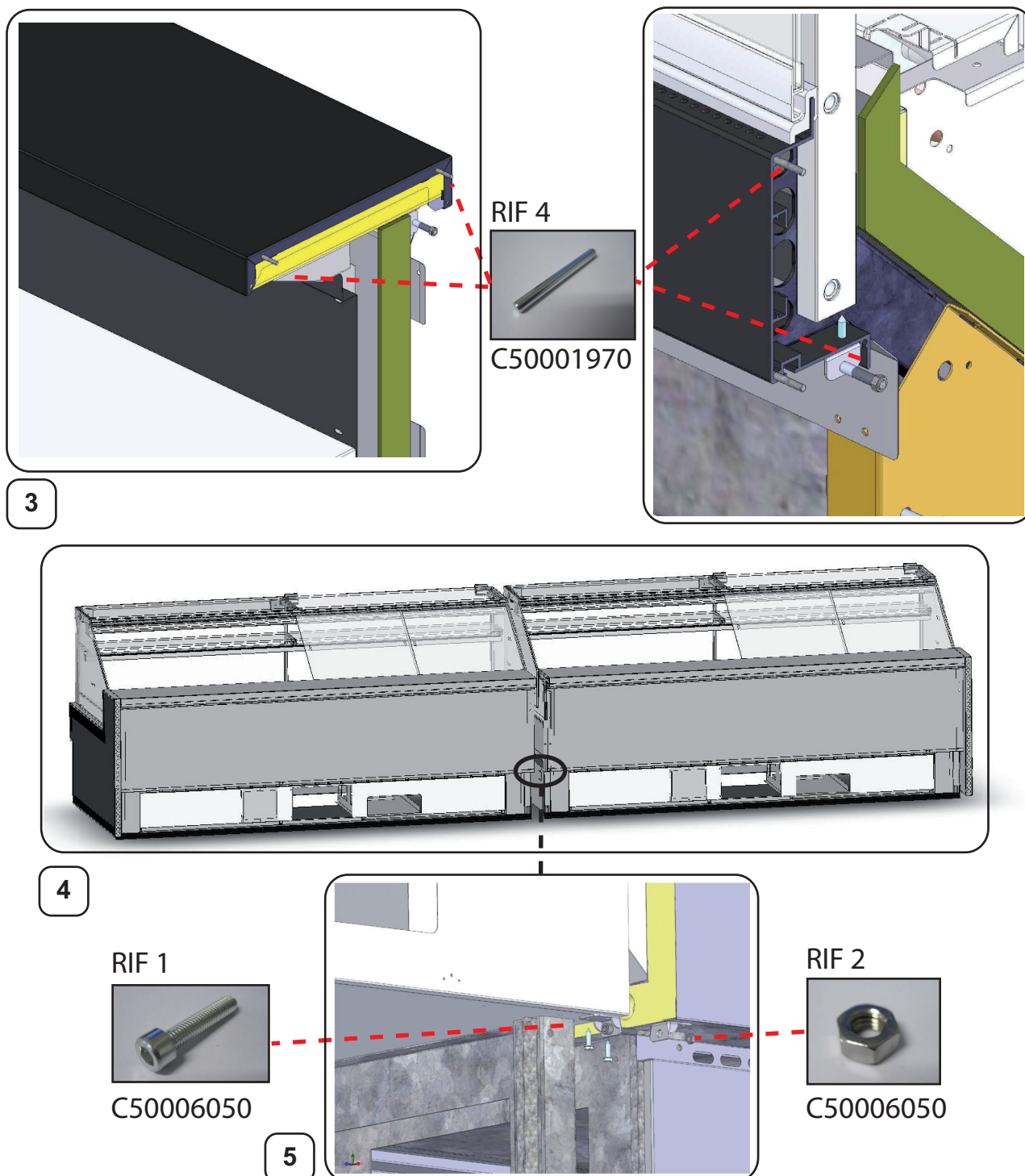


Fig. 8 Ducting the second phase

a) Insert the joint plugs in the work surface and on the front frame panel REF. 4 C50001970 CYLINDR. PLUG ZN D. 4X40 **(3)**

b) Follow the instructions for securing the rear of the cabinet under the backrests **(4)**

c) To join the two cabinets, secure the screw REF. 1 C50006050 SCREW M6 X 30 TCEI ZN and respective nut REF. 2 C50001880 NUT C50001880 M6 ZN **(5)**

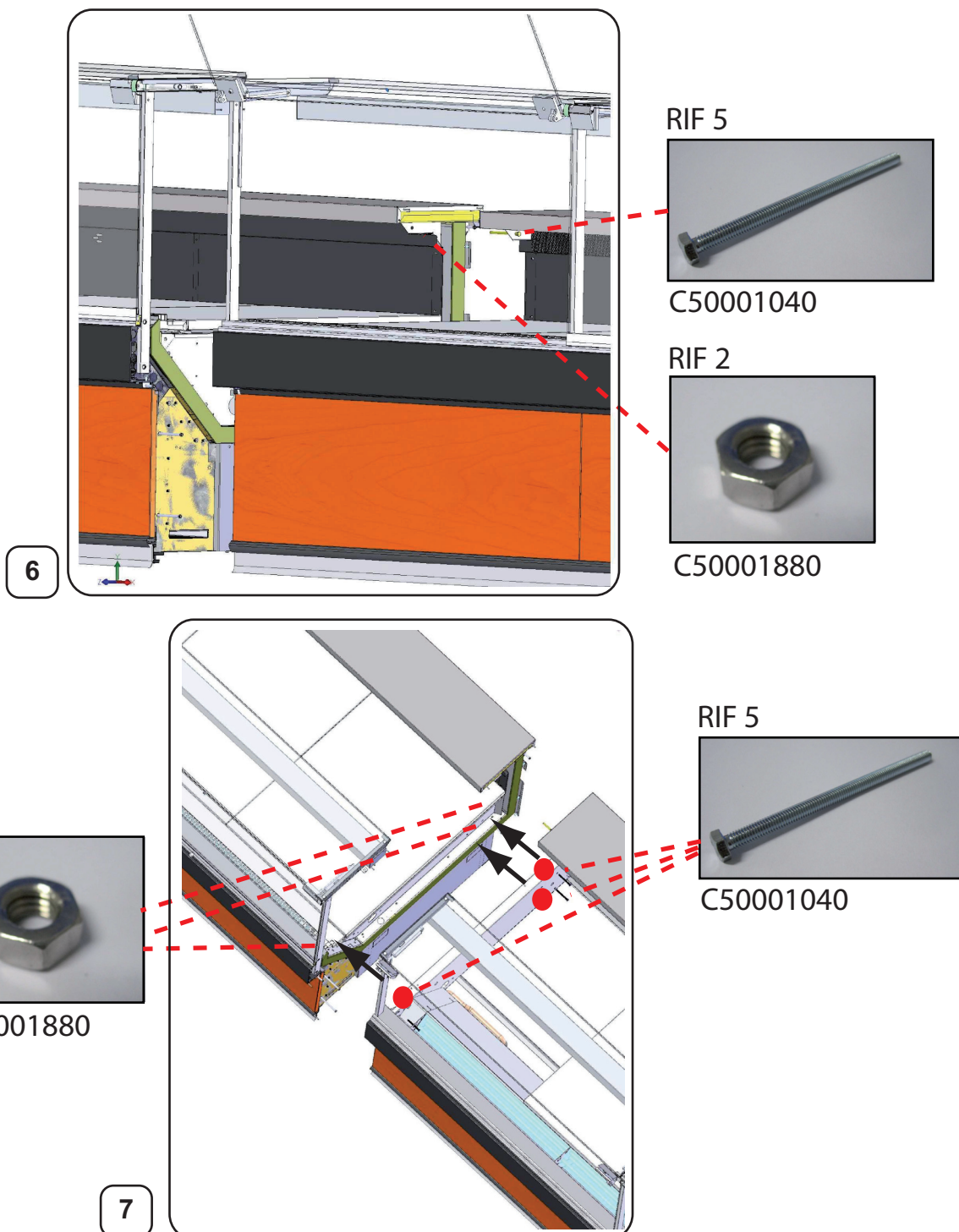
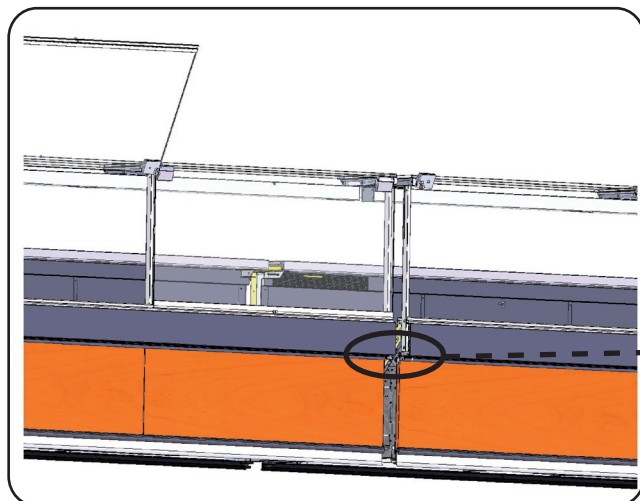


Fig. 9 Ducting the third phase

a) Secure using the screw REF. 5 C50001040 SCREW M 6X 100 TE ZN and respective nut REF. 2 C50001880 NUT AND M 6. under the cabinet work surfaces **(6)**

b) Repeat the securing procedure described previously at the points marked with a red dot in the figure. Always use screws. REF. 5 C50001040 SCREW M6 X 100 TE ZN and respective nut REF. 2 C50001880 NUT M6 ZN **(7)**

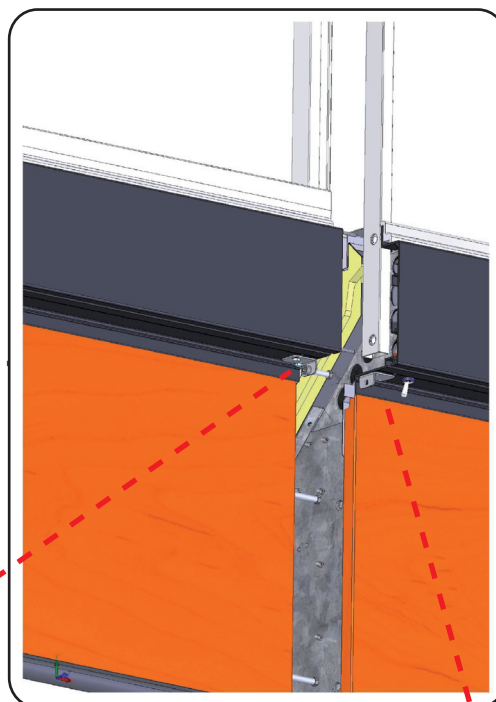


8

RIF 1



C50006050

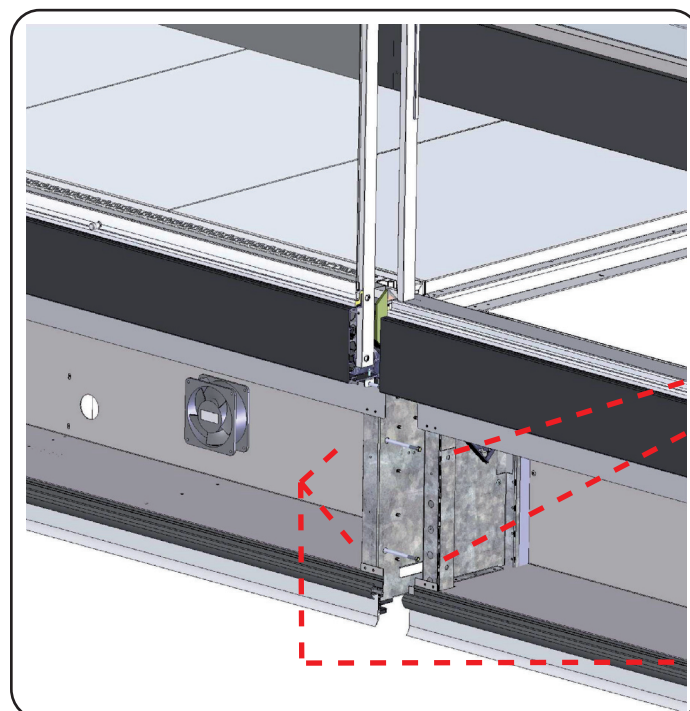


9

RIF 2



C50001880



RIF 6



C50005320

RIF 9



C50003110

Fig. 10 *Ducting the fourth phase*

- a) To join the two cabinets, secure the screw REF. 1 C50006050 SCREW M6 X 30 TCEI ZN and respective nut REF. 2 C50001880 NUT M6 ZN **(8)**
- b) Secure using the screws REF. 6 C50001040 SCREW M6 X 100 TE ZN and respective nut REF. 9 C50003110 NUT M8 ZN. the bottom of the front of the cabinet **(9)**

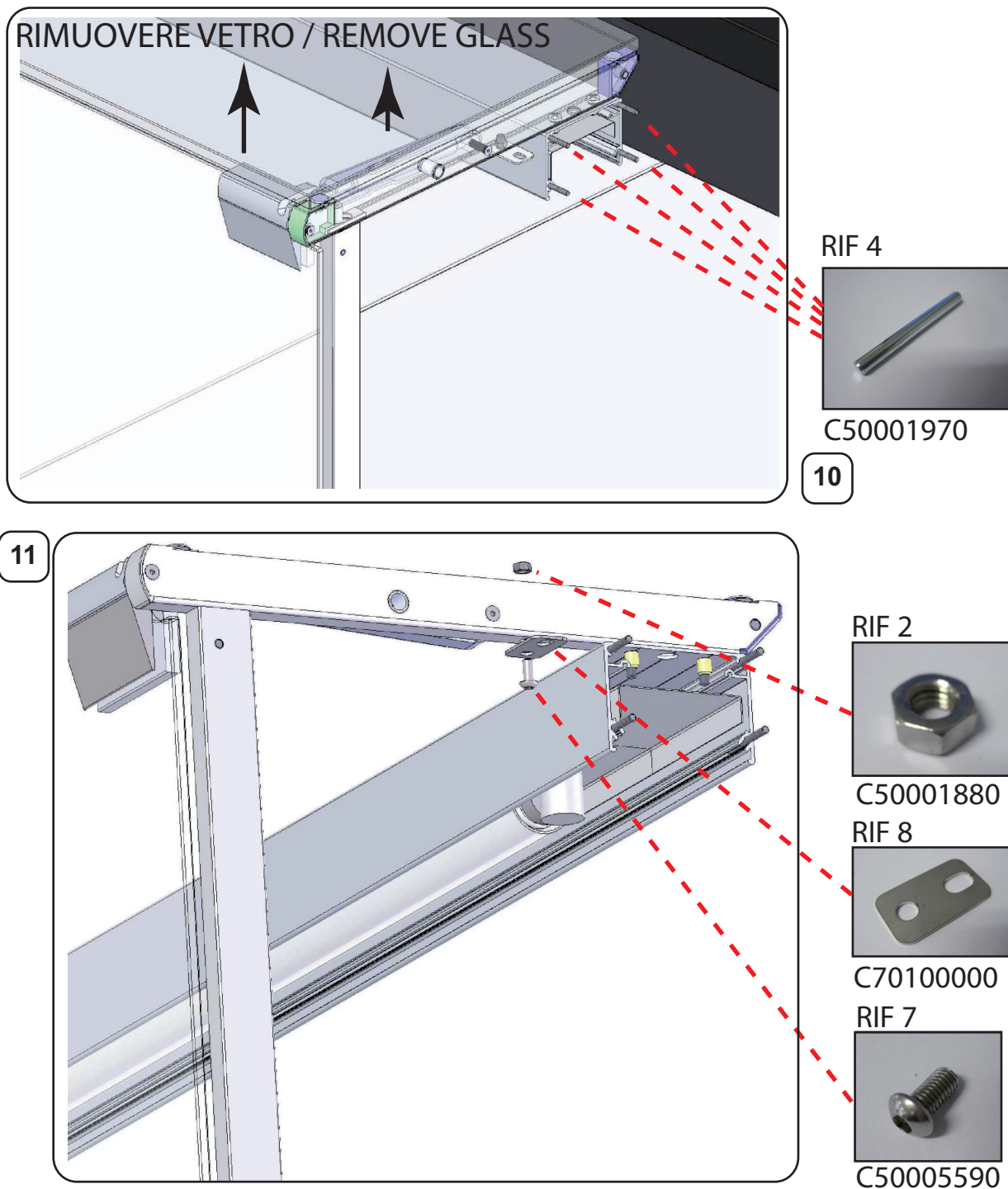


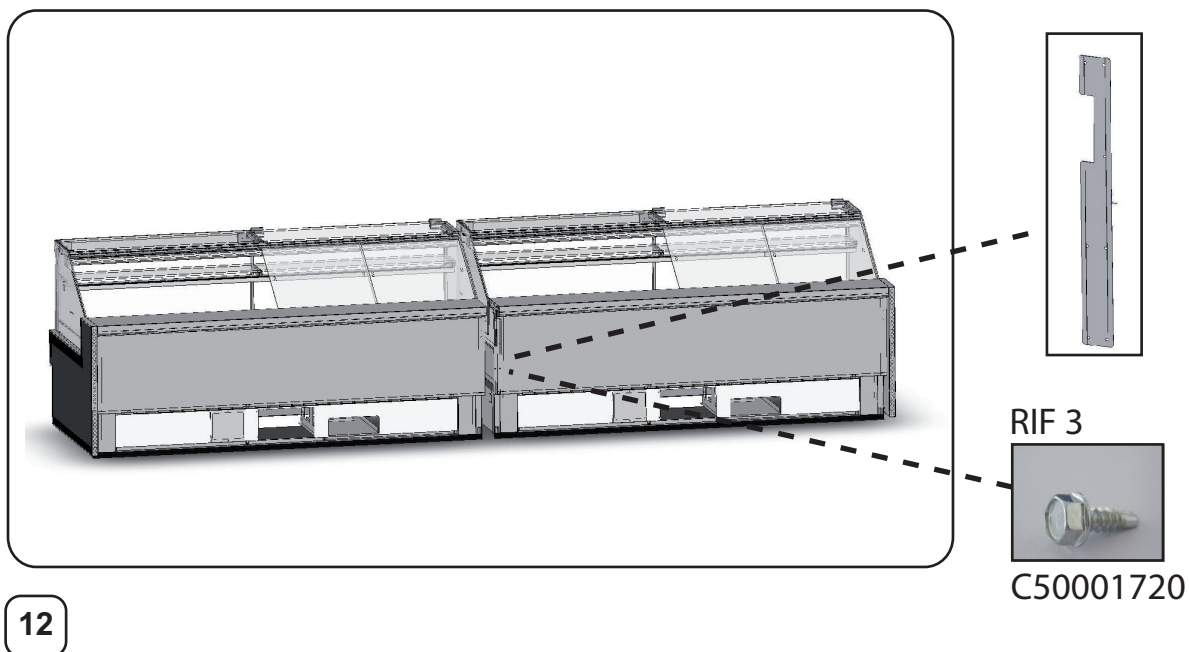
Fig. 11 Ducting the fifth phase

a) Remove:

- Cover glass **(10)**
- Ceiling lamp heads **(10)**
- Top bracket covers **(10)**

b) Insert the plugs REF. 4 C50001970 CYLINDR. PLUG ZN D.4X40 on all the ceiling plug holes on one cabinet **(10)**

c) Secure the plate REF. 8 C70100000 ENIXE SHELF DUCTING PLATE using the screw REF. 7 C50005590 SCREW M 5X 12 TBEI IX and the respective nut REF. 2 C50003110 NUT AND M 5 **(11)**



SOLO CON CHIUSURA IN PLEXI / ONLY WITH REAR PLEXIGLASS CLOSURE

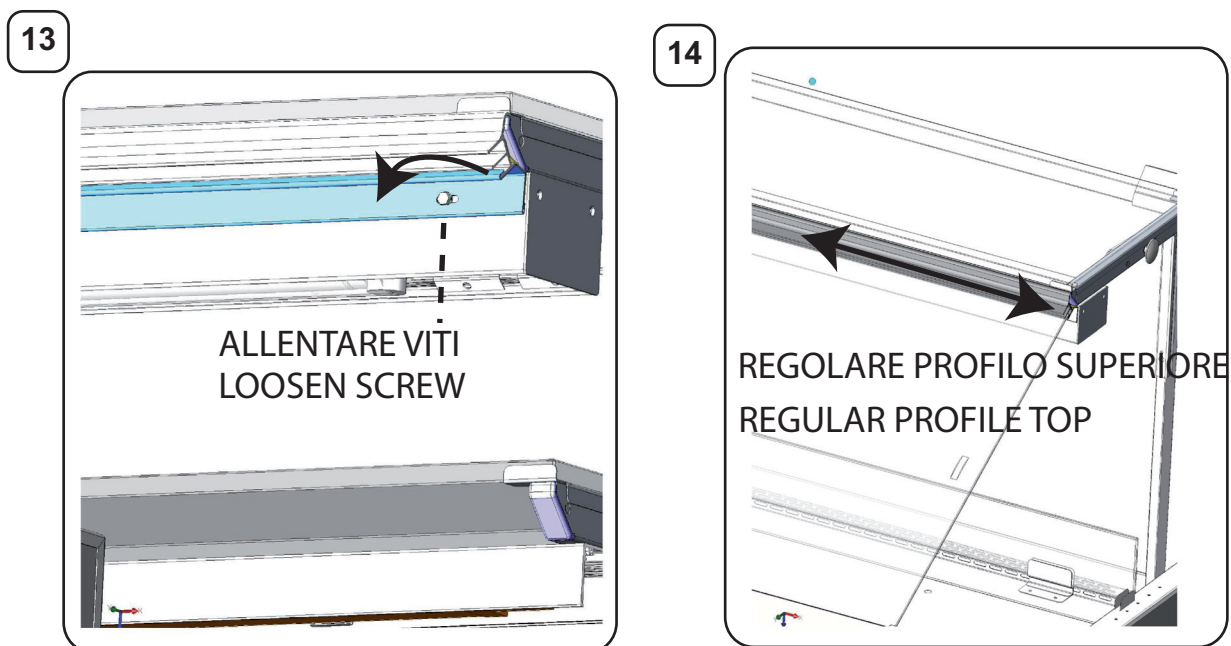


Fig. 12 Ducting the sixth phase

a) To fix the sheet upstands in the back of the assembled counters with self-drilling screws REF 3 C50001720 SCREW YOU AP 4.2 X 13 **(12)**

b) b) If the counter is fitted with rear closure Plexiglass, during the multiplexation of the counters the upper and lower profiles must move in order to compensate for gaps that may arise between the two counters **(13) (14) (15) (16)**

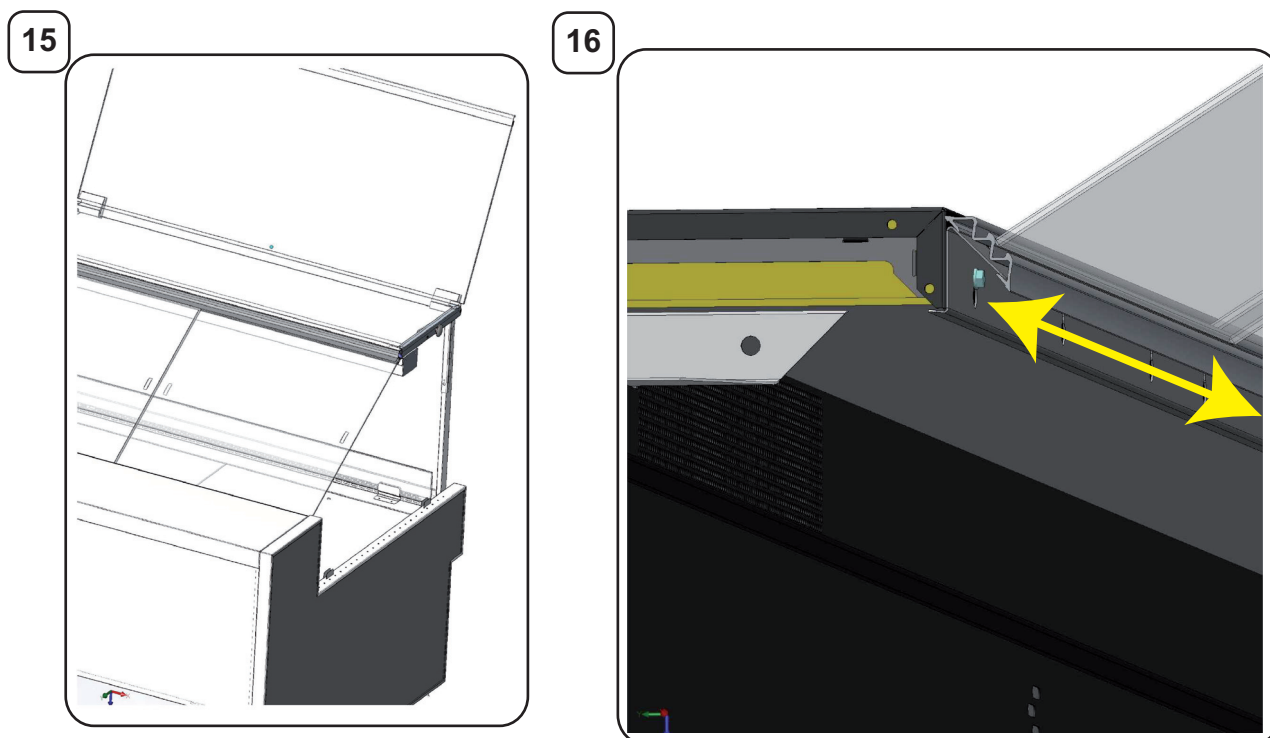


Fig. 13 Ducting the seventh phase

5.1 ASSEMBLY INSTRUCTIONS 'ENIXE' FLAT SHOULDERS

RIFERIMENTI KIT / REFERENCES KIT

RIF 1



C600001080

RIF 2



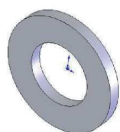
C50001730
PZ = 12

RIF 3



C50004110
PZ = 3

RIF 5



C50004110
PZ = 12

RIF 6



C50003310
PZ = 1

Fig. 14 References kit flat shoulders

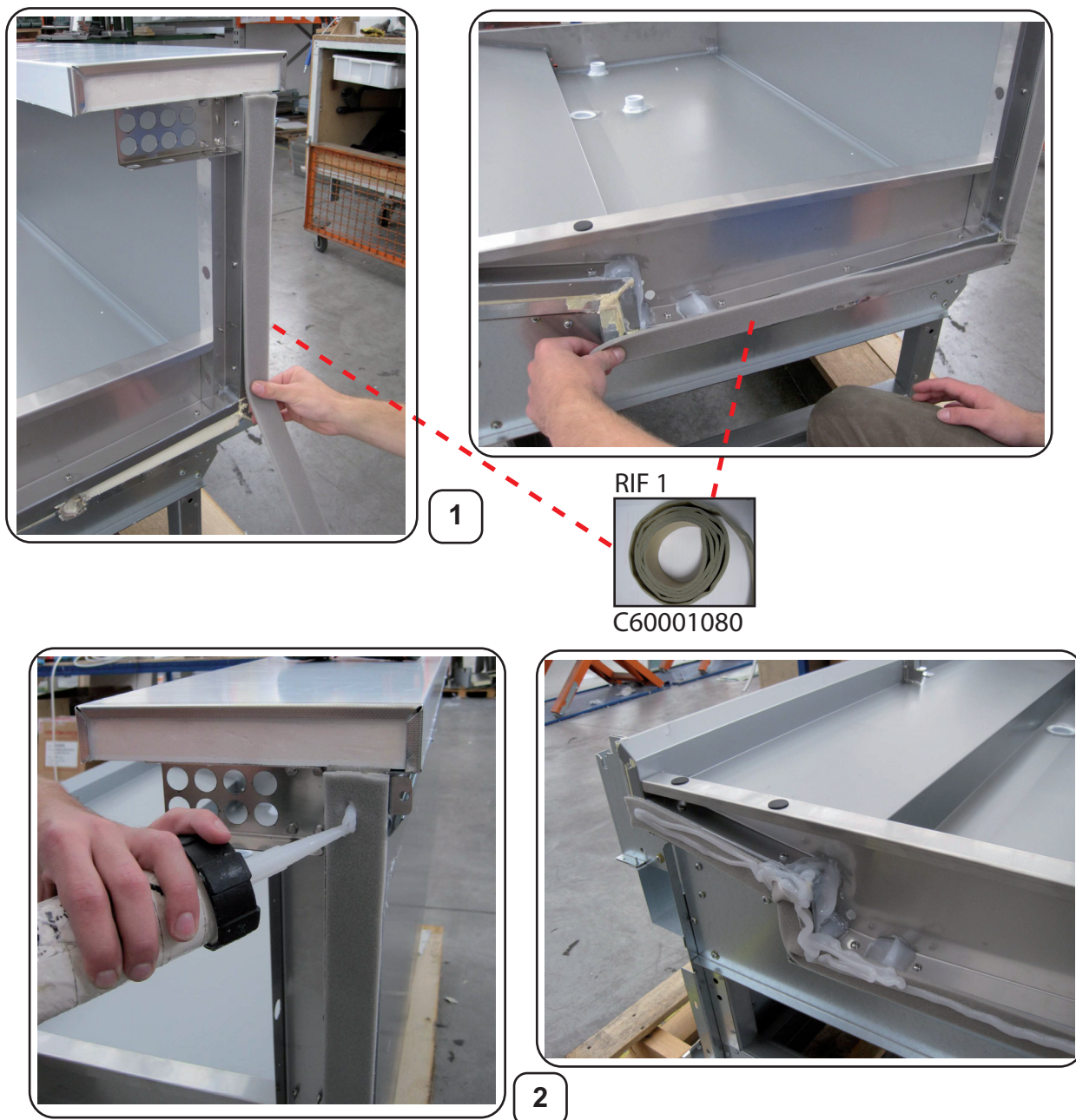
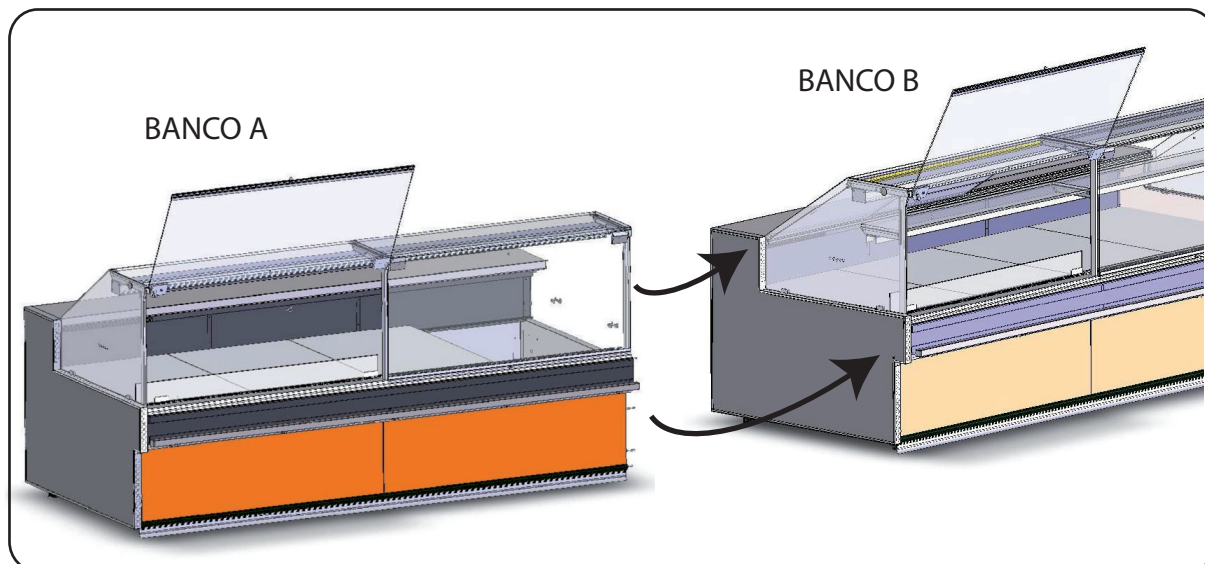
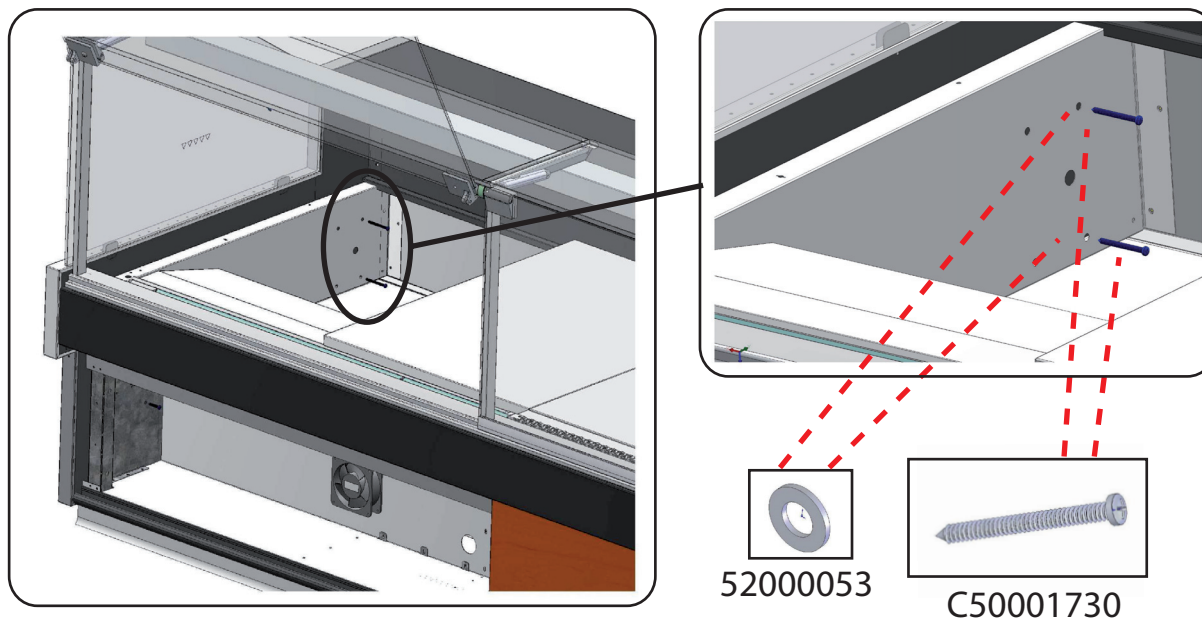


Fig. 15 Assembly first phase

- a) Apply the adhesive sponge C60001080 along the entire edge of the tank of the cabinet to be ducted **(1)**
- b) Apply the silicone along the entire edge of the tank above the adhesive sponge **(2)**



3



4

Fig. 16 Assembly second phase

a) Use the screws supplied C50001730 SCREW AF 4.8 X 60 TC-IC to secure the side from the inside of the cabinet to the back of the side in the tank as shown in the figure **(4)**

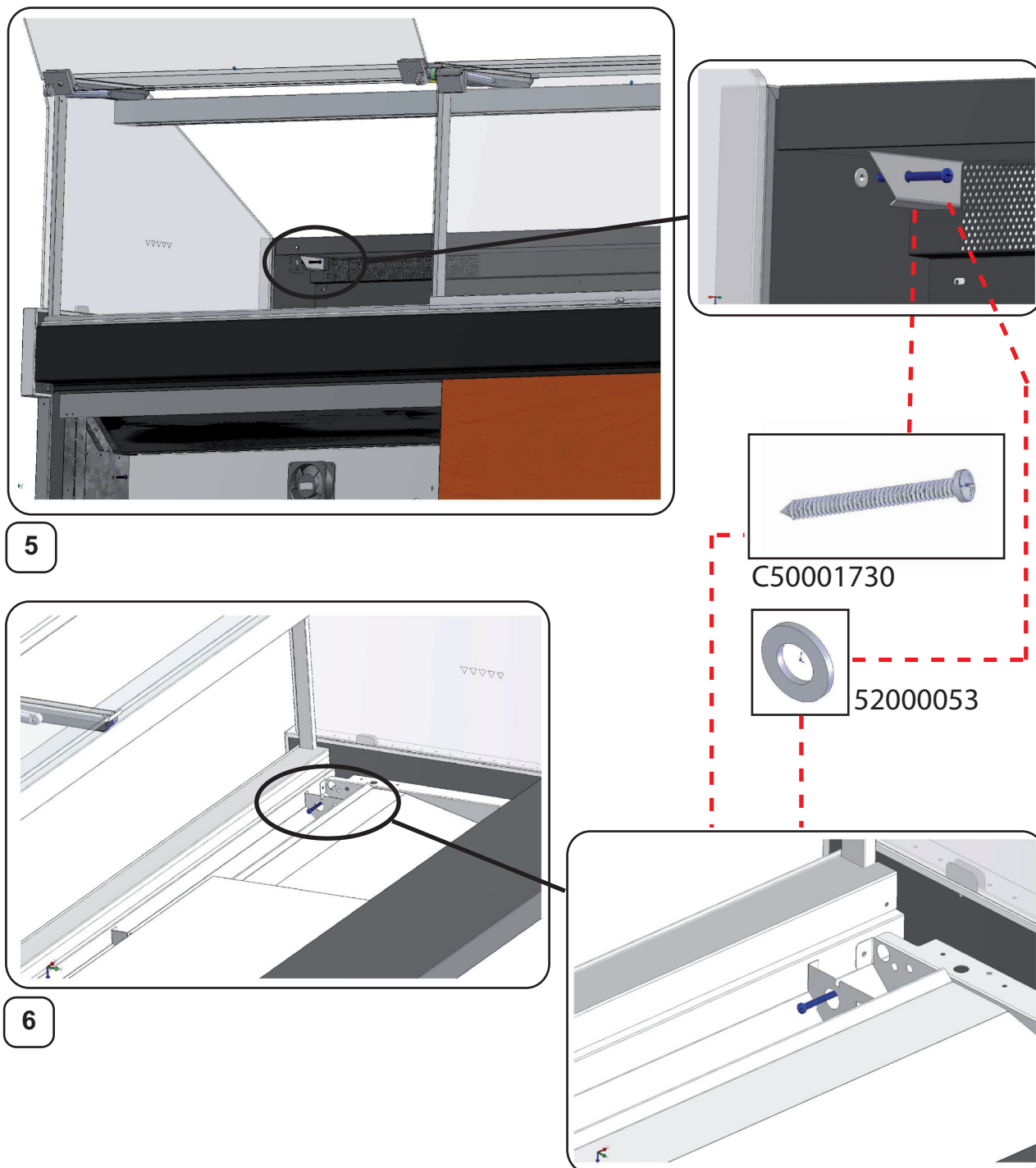


Fig. 17 Assembly third phase

a) Use the screws supplied C50001730 SCREW AF 4.8 X 60 TC-IC to secure the side from the inside of the cabinet to the back of the side in the tank as shown in the figure **(5)**

b) At the front of the tank, secure the side using screws C50001730 SCREW AF 4.8 X 60 TC-IC as shown in the figure **(6)**

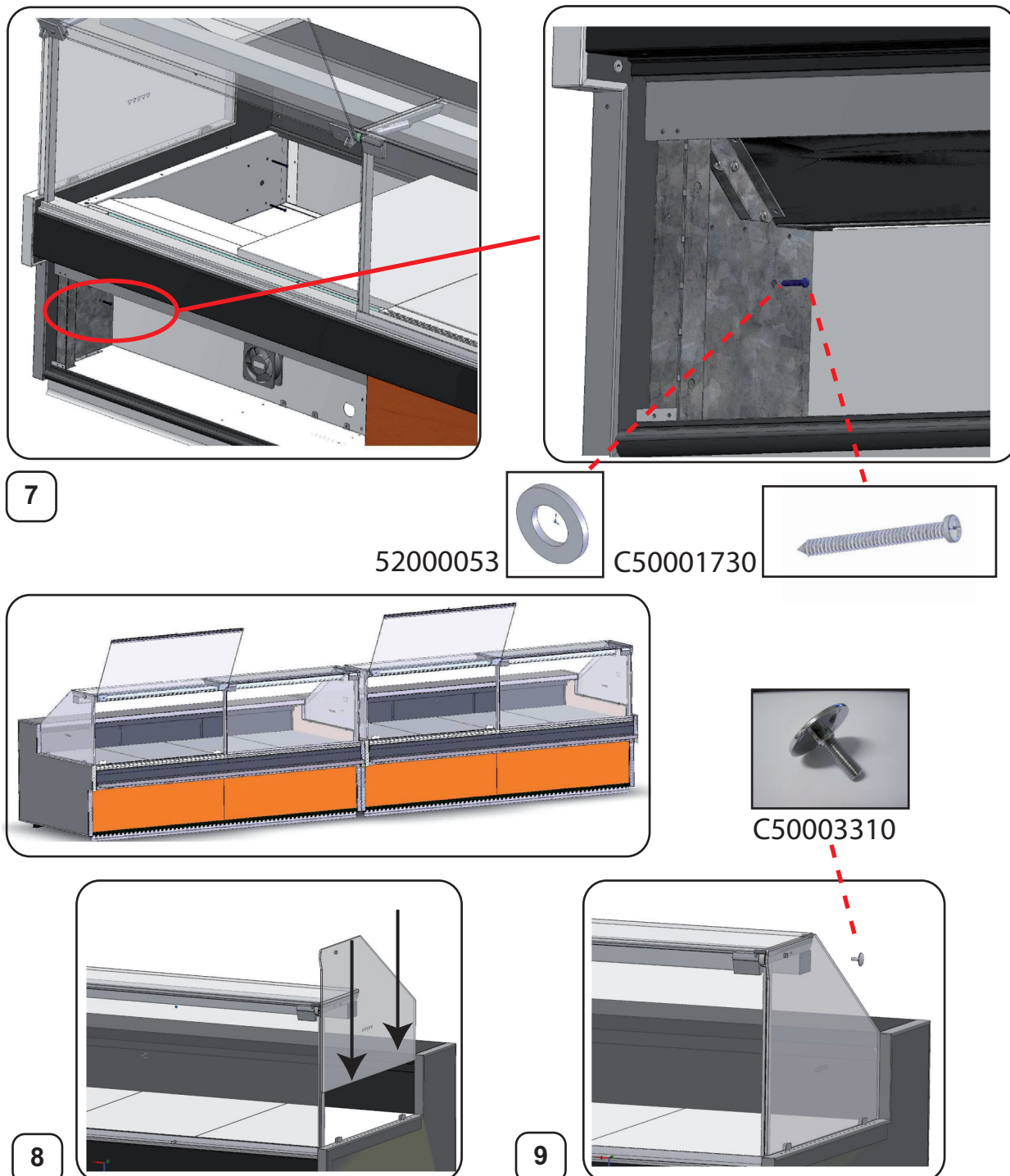


Fig. 18 Assembly fourth phase

- a) Secure the screw C50001730 SCREW AF 4.8 X 60 TC-IC on the metal plate as shown in the figure (7)
- b) Assemble the two glass sides. they must be positioned inside the supports that protrude from the top of the sides.

c) Secure the glass using the chromeplated boss C50003310 GLASS HOLDER D.35 **(8) (9)**

5.2 FLAT DUCTING SHOULDERS WITH SIDE CASE

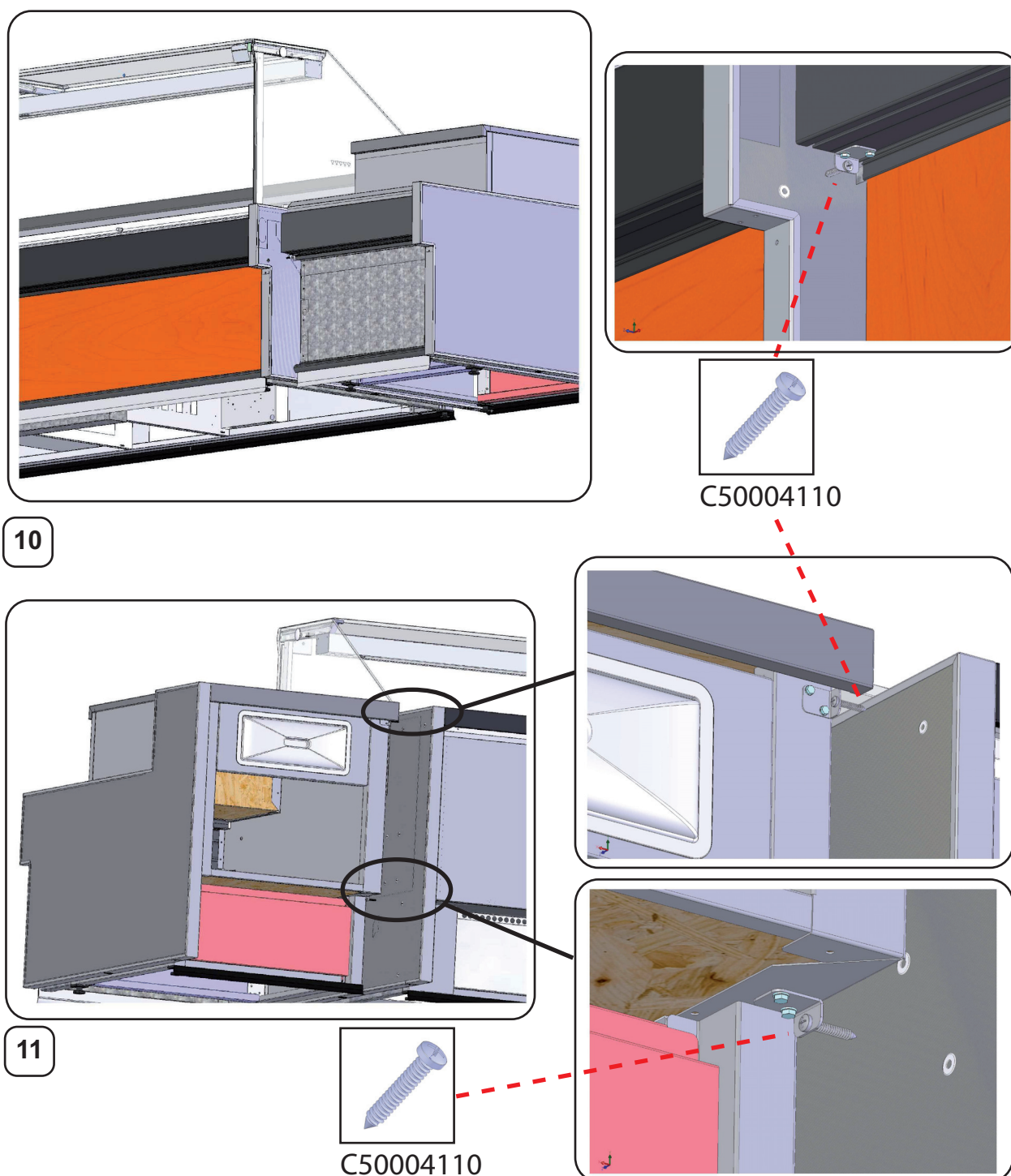


Fig. 19 Assembly first phase side case

- a) For ducting with the side case at the front of the cabinet, secure the screw C50004110 SCREW AF 4.8 X 32 TC-IC in the angle bar fixed under the side case frame profile **(10)**
- b) At the bottom, using screws once again C50004110 SCREW AF 4.8 X 32 TC-IC secure the top of the side case and then the bottom to the side as shown in the figure to the left **(11)**

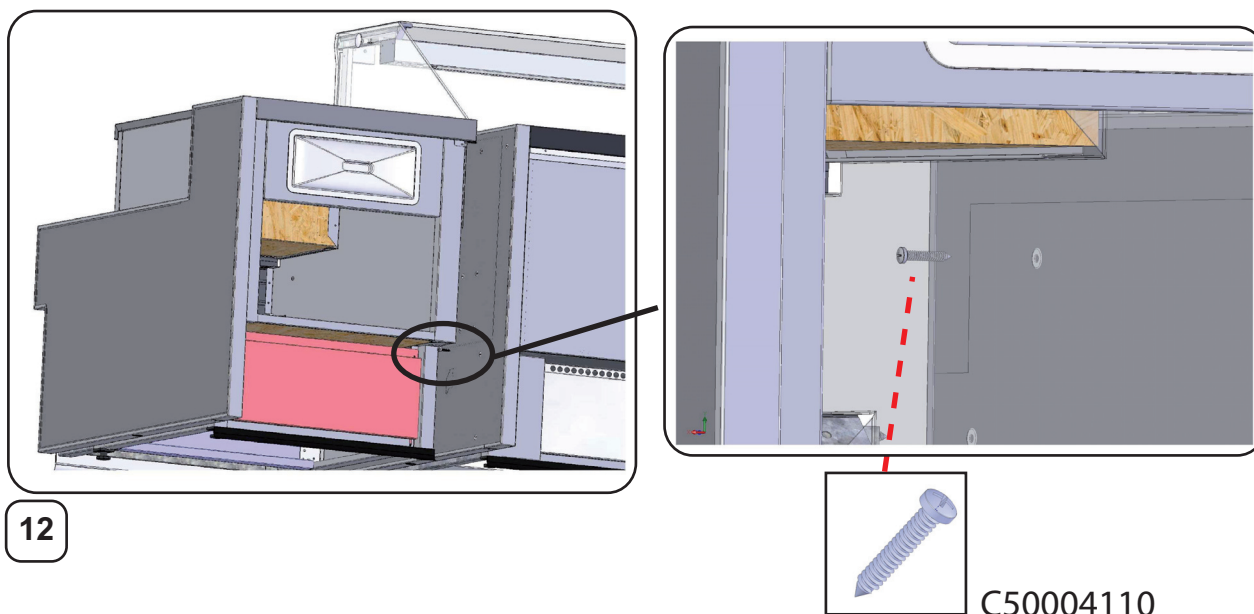


Fig. 20 Assembly second phase side case

- a) Complete securing by affixing the screw C50004110 SCREW AF 4.8 X 32 TC-IC to the point shown in the figure located inside the side case **(12)**

5.3 Disassembly and subsequent reassembly

The Customer is responsible for the cabinet disassembly in order to move it and for its subsequent reassembly.

For technical service, the Customer can apply to the Reseller.

5.4 Fixing

The cabinet described in this manual is provided with screw feet and therefore does not need to be fixed to the floor.

5.5 Installation

Unless otherwise specified, the Customer is responsible for the operations mentioned below.

5.5.1 Connection to a remote condensing unit

The connection to a remote condensing unit concerns only cabinets "without a refrigeration unit".



Qualified

Both the connection and the start-up shall be carried out by a Refrigerant Specialist.
Refer to the cabinet layout for the position of the refrigerant fluid intake and outlet pipes.

5.5.2 Connection to the mains

Connect the cabinet to a mains power supply having an impedance lower than 0.228 ohm.

Line supply, frequency and voltage must correspond to those stated on the cabinet rating plate. When the compressor is started, the nominal voltage must be within $\pm 10\%$.

We recommend the use of a omnipolar isolation switch of adequate rating (C or D) upstream of the outlet.

Moreover, according to the law, both the system and the socket must be connected by a differential switch with 0.03 A release current.



Warning!

The cabinet must be earthed.

Before plugging in cabinets "with a refrigeration unit", check that the isolator is open, in 0, OFF or green position. Then plug the cabinet in and turn on the switch.



Note!

Refer to **"9. Parameter table of control panel"** on page 42

5.5.3 Connection to the drain line

The cabinet must be connected to a drain line if it is not provided with tanks collecting the condensate coming from inside the cabinet tank. In this case, connect the condensate drainage pipe to the drain line of the place where the cabinet has been installed.

5.6 Commissioning

5.6.1 Starting:

Start-up settings are performed through a key panel, as shown in the following figure.

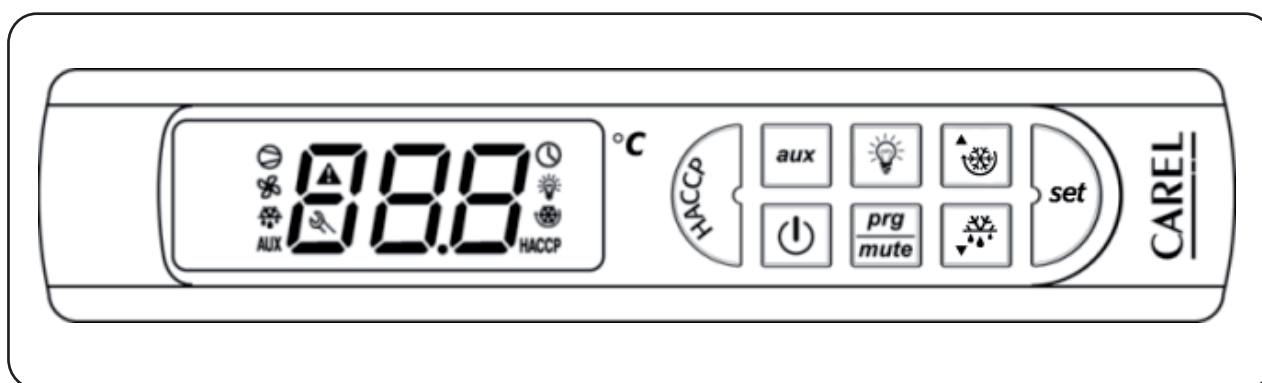


Fig. 21 Carel control unit key panel

5.6.2 Setting

Start-up settings are performed in the factory during the testing procedure by the Manufacturer.

As for set-up operation parameters, refer to the **List of parameters** in "**9. Parameter table of control panel**" on page 42.

To modify the above mentioned parameters, refer to the enclosed "**Carel control unit instructions for use**".

5.7 Idle time and restarting

No special measures must be taken in case of prolonged idle times and subsequent restarting of the cabinet.

6. Instructions for use

the Customer is responsible for the operations mentioned below.

6.1 Correct use of the cabinet

Note!

When using the cabinet we recommend to observe with the utmost scrupulousness the principles of the Hazard Analysis and Critical Control Point (Haccp) concerning:



personal hygiene of all the operators of food service;
plant hygiene;
food transport;
interrupted cold chain;
food preservation.

Note!

In particular:

products must be brought from the warehouses at a temperature close to their ideal storage temperature and immediately placed in the cabinet.



Filling the cabinet with products whose temperature is higher than that of the cabinet itself may make the cabinet operating conditions worse and even deteriorate the conservation of the already displayed goods.

To ensure the cabinet good operating conditions, displayed good must not obstruct the refrigerated air circulation.

Note!

Front glasses must be lifted to their maximum opening point and kept open only as long as it takes to store or remove food, or for cleaning purposes. Pistons act as a lifting back-up and prevent the glass from accidental falling.



If cabinets are provided with hatches, these must be opened only as long as it takes to store or remove food in order to avoid an anomalous rising of the cabinet working temperature.

6.2 Uses to be avoided

Prohibition!



Do not set temperatures lower than those recommended for the cabinet category. This would not bring any advantage and may block the evaporator.

Do not store goods over the maximum load line. This may cause ice formation on the evaporator, which may damage the thermal conditions of the correctly stored products.

Do not obstruct the air inlet grille located in the display surface front side.

6.3 Working limits

Refer to the enclosed "**Carel control unit instructions for use**".

6.4 Cabinet control functions

Here are the cabinet control functions reckoned among the Customer's common skills:

- *cabinet switching on;*
- *manual defrosting of the evaporator;*
- *setting temperature;*
- *periodical cleaning and maintenance;*
- *cabinet switching off.*

To carry out the listed control functions, refer to the enclosed "**Carel control unit instructions for use**".

6.4.1 Manual defrosting

In order to avoid ice formation on the evaporator and consequent reduction of cold air flow, the unit has an automatic system that will defrost the cabinet periodically, whose daily frequency has been preset by the Manufacturer during the testing procedure.

In case of an anomalous reduction of the refrigerated air flow, the manual defrosting of the cabinet must be carried out.

7. Maintenance instructions

7.1 General warnings

Maintenance operations described in this manual concern planned routine maintenance. **The Customer is responsible** for the routine maintenance of the equipment.

Special maintenance shall be carried out only by qualified personnel according to what stated in the "**Maintenance Manual**", which is not an integral part of this manual.

7.2 Periodical cleaning



Warning!

Before starting to clean the cabinet, unplug it from the mains.

Cabinet cleaning:

- **Clean every day** the areas around the display surface with water and a neutral detergent, then dry the parts with a soft cloth.
- **Clean weekly** both the product display surface and the tray bottom.



Prohibition!

It is strictly forbidden to clean the cabinet with acid or ammonia-based compounds.



Warning!

When cleaning the cabinet tray, after having removed the display shelves, be careful not to injure yourself on the evaporator fins as they may be sharp due to their reduced thickness.

Condensing unit cleaning:

- Drain **every day** the water collected in the special tray.
- Clean the unit at least **once a month** by using a vacuum cleaner and a hard bristle brush. A dirty condensing unit reduces motor performance and increases electricity consumption.



It is advisable to wear protective gloves when cleaning both the cabinet and the condensing unit.

7.3 Bulb replacing

To replace bulbs act as follows:

- 1) *unplug the cabinet from the mains or open the main switch;*
- 2) *remove the plastic guard;*
- 3) *hold the defective bulb at both ends;*
- 4) *turn the bulb 90° until you hear a slight click;*
- 5) *remove the bulb with care;*
- 6) *fit the new bulb;*
- 7) *turn the new bulb as above;*
- 8) *replace the plastic guard.*

7.4 Periodical maintenance

7.4.1 Check of the glass lifting system



Qualified

Check **at least once a year** that the glass lifting system works perfectly.

7.5 Special maintenance

The maintenance of the refrigeration system components pertains to special maintenance operations. Refer to "**Maintenance Manual**".

7.6 Troubleshooting



Qualified

Cabinet restoring shall be performed by a refrigerant specialist.

Refer to the enclosed "**Carel control unit instructions for use**".

The unit allows to control operation signals concerning the good working order of the cabinet, alarm signals with relative description and restoring modality.

8. Instructions for demolition and disposal

Make sure that all parts of the cabinet are disposed of in compliance with the laws in force in the User's country.

Pay particular attention to the following list of materials used to produce the cabinet and entrust their recovery and/or disposal to specialized and authorized companies:

- *thermal insulation;*
- *refrigerant fluid;*
- *electric and electronic components.*



Warning!

In particular, the refrigerant fluid disposal is very dangerous and shall be carried out through incineration by the refrigerant fluid producer.



Prohibition!

The refrigerant fluid is not easily biodegradable.
It must not be discharged in ground waters, rivers, sewages or on the ground.

9. Parameter table of control panel

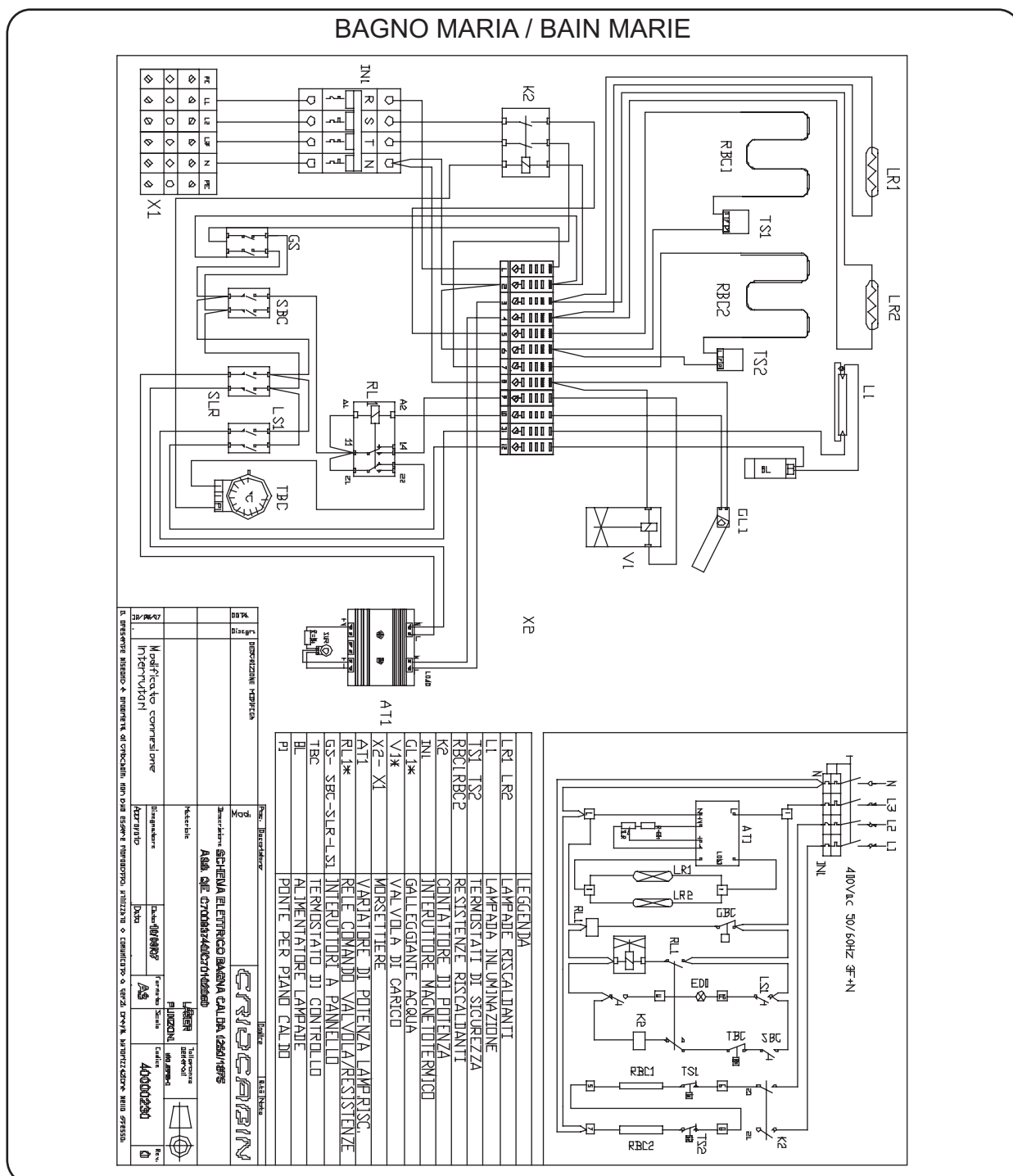
9.1 List of parameters

		TYPE	MIN	MAX	U.M.	Def.	FS	SE
	PROBE PARAMETERS							
/2	Probe measurement stability	C	1	15	-	4	4	4
/4	Virtual probe	C	0	100	-	0	0	0
/7	Probe display on the display unit	C	0	4	-	0	0	0
/t	Probe display on the terminal unit	C	0	4	-	4	1	1
/5	Selection °C or °F degrees	C	0	1	-	0	0	0
/6	Autoscale	C	0	1	-	0	0	0
/8	Product probe calibration S3	C	0	±19,9	°C/°F	0	0	0
/9	Defrost with S3 probe	C	0	1	-	0	0	0
/A	S2 and S3 product probe existence	C	0	3	-	2	2	2
/C	Ambient probe calibration S1	C	0	±19,9	°C/°F	0	0	0
/d	Ambient probe calibration S2	C	0	±19,9	°C/°F	0	0	0
A	ALARM PARAMETERS							
A0	Alarm and fan differential	C	0	199	°C/°F	2	2	2
A4	Digital input 1 configuration DIN1	C	0	7	-	0	0	0
A5	Digital input 2 configuration DIN2	C	0	7	-	0	0	0
A7	Delayed alarm from digital input (A4 = 2, or A5 = 2)	C	0	199	min	0	0	0
Ad	Temperature alarm delay	C	0	199	min	120	60	60
AH	High temperature alarm: max. variation compared to setpoint value.	F	0	199	°C/°F	0	8	8
AL	Low temperature alarm: max. variation compared to setpoint value.	F	0	199	°C/°F	0	8	8
c	COMPRESSOR PARAMETERS							
c0	Compressor start-up delay at power ON	C	0	15	min	0	0	0
c1	Minimum time between two compressor start-ups	C	0	15	min	0	0	0
c2	Compressor shut-down minimum time	C	0	15	min	0	2	2
c3	Compressor operation minimum time	C	0	15	min	0	3	3
c4	Compressor relay safety	C	0	100	min	0	20	20
c6	Alarm delay after continuous cycle	C	0	15	hours	2	2	2
cc	Continuous cycle	C	0	15	hours	4	1	1
d	DEFROST PARAMETERS							
d0	Type of defrost	C	0	3	-	0	0	0
d2	Defrost command type	C	0	1	flag	0	1	1
d4	Defrost at start-up of the instrument	C	0	1	flag	0	0	0
d5	Start-up or digital input defrost delay	C	0	199	min	0	0	0

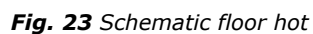
		TYPE	MIN	MAX	U.M.	Def.	FS	SE
d6	Display during defrost:	C	0	1	flag	1	1	1
d8	Alarm delay after defrost or door opening	F	0	15	hours	1	1	1
d9	Defrost priority on compressor time	C	0	1	flag	0	0	0
dd	Dripping time	F	0	15	min	2	2	2
dI	Interval between defrost cycles	F	0	199	ore	8	8	6
dP	Max./real defrost duration	F	1	199	min	30	60	60
dt	End defrost temperature	F	-50	199	°C/°F	4	8	15
F	FAN PARAMETERS							
F0	Fan management:	C	0	1	flag	0	0	0
F1	Fan start-up temperature	F	-40	50	°C/°F	5	5	5
F2	Fans OFF when compressor OFF	C	0	1	flag	1	0	0
F3	Fans OFF during defrost	C	0	1	flag	1	0	0
Fd	Fans OFF after dripping	F	0	15	min	1	1	1
H	OTHER SETTINGS							
H0	Serial address	C	15	-	1	1	1	1
H1	AUX. 1 relay function	C	0	7	flag	5	5	5
H2	AUX 2 relay function (in 6-relay units)	C	0	7	flag	6	6	6
H3	Enabling the keyboard	C	199	-	0	0	0	0
I	LAN CONFIGURATION							
In	Master/Slave unit configuration	C	0	1	flag	0	0	0
L	DIGITAL INPUT							
L1	Light sensor sensibility	C	0	2	flag	0	0	0
Lt	Duration of the light time turned on by the sensor	C	1	15	min	10	10	10
Lo	Enables local ON-OFF	C	0	1	flag	0	1	1
LL	Enables ON-OFF from LAN	C	0	1	flag	0	0	0
Ld	Propagation on LAN of the digital DIN2	C	0	1	flag	0	0	0
r	CONTROL PARAMETERS							
r1	Minimum set allowed to the user	C	-50	r2	°C/°F	-50	-5	-5
r2	Maximum set allowed to the user	C	r1	19,9	°C/°F	90	15	15
r3	Ed alarm enabling (time out defrost) (0 = No, 1 = Yes)	C	0	1	flag	0	1	1
r4	Night setpoint	C	-19,9	19,9	°C/°F	3	6	6
r5	min/max temperature monitoring enabling (0 = No, 1 = Yes)	C	0	1	flag	0	1	1
r6	Night regulation with product probe	C	0	1	flag	0	0	0
rd	Regulator differential (hysteresis)	F	0	19,9	°C/°F	20	2	2
rH	Max. temperature measured during rt	F	0	0	°C/°F	0	0	0
rL	Min. temperature measured during rt	C	0	0	°C/°F	0	0	0
rt	Real interval for temperature monitoring	C	0	0	ore	0	0	0
S	SERIAL CONFIGURATION	C						
S8	Serial communication speed RS485	C	0	1	flag	1	1	1
Sn	Slave number	C	0	5	flag	1	1	1

		TYPE	MIN	MAX	U.M.	Def.	FS	SE
St	Temperature setpoint	C	0	r2	°C/°F	-100	4	4
to	HACCP - HA - HF alarm reset	C	0	1	flag	0	0	0

9.2 Wiring diagrams



PIANO CALDO / HOT SURFACE



10. Attachments

10.1 Reference to manuals of other suppliers

Instructions of control unit CAREL: as attached

10.2 Declaration of conformity: as attached

TABLE OF FIGURES

A	
Assembly first phase	30
Assembly first phase side case	34
Assembly fourth phase	33
Assembly second phase	31
Assembly second phase side case	35
Assembly third phase	32
C	
Carel control unit key panel	37
Control board setting	19
D	
Dimensions Enixe 400 410	11
Ducting the fifth phase	26
Ducting the first phase	21
Ducting the fourth phase	25
Ducting the second phase	22
Ducting the seventh phase	28
Ducting the sixth phase	27
Ducting the third phase	23
E	
ENIXE DUCTING HARDWARE KIT	20
H	
Handling ENIXE	16
L	
Lay-out	12
R	
References kit flat shoulders	29
S	
Schematic floor hot	45
W	
Water pipe connection	18
Wiring diagram wet hot	45

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ENIXE

